

HIPPOCRATES IN CONTEXT

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HIPPOCRATES IN CONTEXT

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EDITED BY

PHILIP J. VAN DER EIJK



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PREFACE

Philip van der Eijk

The XIth International Hippocrates Colloquium was held on the campus of the University of Newcastle upon Tyne during five days of bright sunshine in late August 2002. Guests were welcomed to an opening reception in the Council Room of the Armstrong Building, the University's characteristic Victorian stronghold, named after the 19th century Newcastle entrepreneur and scientist Lord William Armstrong, and situated opposite the Royal Victoria Infirmary—two buildings that aptly illustrate Newcastle University's origins in the School of Medicine and Surgery (later the College of Medicine), established in 1834, and Armstrong College, which was founded in 1871 for the teaching of physical sciences. These two colleges, originally part of the University of Durham, merged to form King's College in 1937, and in 1963 King's College became the University of Newcastle upon Tyne. Forty years of expansion followed, and early in the twenty-first century, the University's student population had risen to nearly 20,000 (including more than 2,000 overseas students), its teaching and research activities spanning seven areas: agriculture and biological sciences, arts and humanities, education, engineering, social sciences, medicine and dentistry, and physical sciences. Latin and Greek have been taught at Newcastle since 1874, Ancient History and Classical Archaeology since 1910 and 1931 respectively.

Academic proceedings lasted for three days, featuring a busy programme of forty-four presentations and lively discussions. Half way through the programme, the Lord Mayor and Lady Mayoress of the City of Newcastle upon Tyne provided generous hospitality with a buffet lunch in the Civic Centre, while delegates were given a presentation about the ambitious Newcastle-Gateshead Initiative and its impressive programme of cultural activities as instruments of urban regeneration. The Colloquium was concluded with a festive conference dinner in the splendid nautic surroundings of Trinity House on the Newcastle quayside. Those who had the time to stay for the next day enjoyed an excursion to Craggside house and gardens in the

delightful Northumberland countryside—another of Lord Armstrong’s remarkable creations, the first house in the world to be lit by hydro-electric power.

It was the first time, thirty years after its foundation by Jacques Jouanna and Louis Bourgey in Strasburg in 1972, that the Colloque International Hippocratique was held in the English speaking world. Newcastle was a natural venue, for it was here that the subject of ancient medicine, long before it became a fashionable topic in degree programmes in Classical Studies at British universities, had been taught for many years as part of the Classics undergraduate programme—supported by precious Library resources such as the Pybus Collection (a rich collection of historical medical works from the 16th century onwards, engravings, letters, portraits and busts), and the Medical Collection (18th–19th century medical books and pamphlets).

Indeed, the Hippocrates conference marked an important moment of further growth in the study of medical history at Newcastle. Building on the foundation laid by James Longrigg (who retired in 1998), the subject has rapidly expanded and has become one of the University’s major international research and teaching strengths. The combined support of the University and the Wellcome Trust, enabling *inter alia* the appointment of Thomas Rütten in 2002, resulted one year later in a Wellcome Trust Enhancement Award—a very generous and highly competitive grant, which provided the basis for the Centre for the History of Medicine, a partnership between the medical historians at the Universities of Newcastle and Durham. The activities of the Centre comprise a co-ordinated research programme, a Masters training programme in the History of Medicine, a number of Ph.D. projects, a series of seminars/workshops/conferences (including the well-known Pybus History of Medicine seminars), History of Medicine teaching initiatives within the medical curriculum, and a series of public engagement activities. Of particular interest to the study of ancient medicine are the annual *Approaches to Ancient Medicine* conferences, alternating between Newcastle and Reading.

The Newcastle Hippocrates conference was attended by over a hundred participants, representing a wide variety of disciplines (including members of the medical profession). As such, the conference testified to the remarkable growth of Hippocratic studies over the last ten years, and its development from a rather specialised, inti-

mate ‘Colloque’, predominantly philological in scope, to a much broader, interdisciplinary forum for a wide range of different approaches. What is particularly striking is the way in which, most notably in the anglophone world, ancient medicine has gained ever broader appeal, especially among scholars and students of Greek and Roman antiquity but also in other disciplines such as the history of medicine and science, the history of philosophy and ideas, (bio-) archaeology and environmental history, the study of the linguistic, literary, rhetorical and cultural aspects of intellectual ‘discourse’, and even areas such as bio-ethics and medical and social anthropology. The popularity of the subject even extends beyond the confines of academic communities, and ancient medicine has proved to be an effective tool in the promotion of the public understanding of medicine and its history. Greatly helped by scholarly efforts to make the subject more accessible by means of modern translations of the original texts, increasing numbers of students of the Greek and Roman world have now embraced ancient medicine as a new area of research with very interesting implications for the wider study of the societies and cultures of classical antiquity. Medical ideas and medical texts have enjoyed a surge of interest from students in ancient philosophy and in the field of Greek and Latin linguistics. Likewise, the social and cultural history of ancient medicine, and the interface between medicine, magic and religion has proved a remarkably fruitful field of research—not to mention areas such as women and gender studies and studies into ‘the body’.

The theme of the conference, ‘Hippocrates in Context’, was meant to tie in with this general scholarly tendency. The purpose of the conference was to broaden the appeal of Hippocratic studies even further by encouraging research into the Hippocratic writings from the point of view of their relationship with the historical context in which they were written, and the impact they had on ancient society, culture, mentality and morality, language, literature and thought. For however influential the Hippocratic writings have been in later periods, and however much the name of Hippocrates and all it has come to stand for is sometimes believed to be ‘of all times’, these works arose at a particular time and place in history—and indeed they also shed light on that history, for they are important documents for the social, intellectual and cultural history of the classical world, and their potential is by no means exhausted. ‘Context’ here

is not restricted to the Greek world, but also includes the medical thought and practice of other civilisations in the Mediterranean, such as Persian, Babylonian, and Egyptian medicine.

A further point of interest were the relations between the Hippocratic writings and ‘non-Hippocratic’ medical authors of the fifth and fourth century BCE, such as Diocles of Carystus, Praxagoras of Cos, as well as the relevant works of Plato, Aristotle and Theophrastus. This is a rich field, with many interesting questions of intellectual development, influence and exchange, but also a difficult field, due to the fragmentary nature of the evidence. Thirdly, the conference aimed to promote research into some of the more neglected works in the Hippocratic Corpus, such as *Internal Affections*, *On the Eye*, and *Prorrhethicon*. And finally, as has become customary in Hippocratic studies, a number of papers were devoted to the impact and reception of Hippocratic thought in later times.

As Plato reminds us, healthy and eager growth also has its painful side-effects, particularly when it comes to the editing and publication of the conference proceedings (only a selection of the papers that were presented have been included in the present volume).¹ On the other hand, the Hippocratic Colloquia boast a proud tradition of ‘Acta’, which document the state of the subject at a given time to members of the scholarly community, the wider public as well as to future generations. Studies in ancient medicine are flourishing like never before, and it is hoped that the present volume both testifies and contributes further to this development.

¹ The following papers were read during the conference but, for various reasons, not included in this volume: Elena Balycheva, ‘Towards a grammar of Hippocratic prescriptions’; George Boger, ‘A Hippocratic prescription for philosophy: an ideological difference between ancient medicine and ancient philosophy’; Scott Anthony Burgess, ‘The formation and dissolution of the tissues in Plato’s *Timaeus* and the Hippocratic *Fleshes*’; Simon Byl, ‘Hippocrate et l’ambivalence’; Lesley Dean-Jones, ‘Polybus’ heartless man’; Nancy Demand, ‘Hippocratic doctors and non-compliant patients’; Philip van der Eijk, ‘Diocles of Carystus and his intellectual context’; Klaus-Dietrich Fischer, ‘Fresh light on the Hippocratic *Aphorisms* in Latin in the early Middle Ages’; Manfred Horstmanshoff, ‘Uroscopy in theory and practice. From divinatory sign to medical symptom’; Jennifer Clarke Kosak, ‘An economy of pain: some patterns of remedy in the Hippocratic Corpus’; Alessandro Lami, ‘L’inizio di *Affezioni interne*’; Juan Antonio López Férez, ‘Euphemisms relating to sexual intercourse in the Hippocratic Corpus’; Ignacio Rodríguez Alfageme, ‘Noise and sound in Corpus Hippocraticum’; Christopher Tuplin, ‘Doctoring the Persians’ (see *Klio* 86, 2004); and Heinrich von Staden, ‘Sexual intercourse and sexual abstinence: Hippocratic therapeutics in its cultural contexts’.

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Newcastle upon Tyne, April 2005

ABBREVIATIONS

<i>Asyl.</i>	R. Herzog, G. Klaffenbach (1959), <i>Asylierkunden aus Kos</i> , Berlin.
<i>BL</i>	<i>Berichtigungsliste der griechischen Papyrusurkunden aus Ägypten</i> , ed. W. Clarysse, Leuven 1989–.
<i>Budé</i>	<i>Collection des Universités de France</i> .
<i>Checklist (2001)</i>	R.S. Bagnall, et al. (eds.), <i>Checklist of Editions of Greek, Latin, Demotic, and Coptic Papyri, Ostraca, and Tablets</i> , Oakville, Connecticut, and Oxford (= <i>Bulletin of the American Society of Papyrologists</i> Supplement 9). For an online and updated version of the <i>Checklist</i> , http://scriptorium.lib.duke.edu/papyrus/texts/clist.html .
<i>CMG</i>	<i>Corpus Medicorum Graecorum</i> .
<i>DELG</i>	<i>Dictionnaire Étymologique de la Langue Grecque</i> , ed. E. Boissacq, Heidelberg 1916.
<i>DK</i>	H. Diels, W. Krantz, <i>Die Fragmente der Vorsokratiker</i> , 3 vols., Berlin, 1961 ¹⁰ .
<i>FrGrHist</i>	F. Jacoby (1923–1958), <i>Die Fragmente der griechischen Historiker</i> , 3 vols., Leiden.
<i>ID</i>	A. Plassart, J. Couprie, F. Durrbach, P. Roussel and M. Launey (eds.) (1926–1972), <i>Inscriptions de Délos</i> , 7 vols., Paris.
<i>IG</i>	<i>Inscriptiones Graecae</i> , Berlin 1873–.
<i>K.</i>	C.G. Kühn, <i>Claudii Galeni opera omnia</i> , 22 vols., Leipzig, 1821–1833, repr. Hildesheim, 1964–1965.
<i>L.</i>	E. Littré, <i>Œuvres complètes d'Hippocrate</i> , 10 vols., Paris, 1839–1861.
<i>LSJ</i>	H.G. Liddell, R. Scott, H.S. Jones, <i>A Greek-English Lexicon</i> , Oxford, 1996 ⁹ (with revised supplement).
<i>M-P³ (1997)</i>	M.-H. Marganne and P. Mertens (eds.), 'Medici et Medica, 2e édition', in: I. Andorlini (ed.), <i>"Specimina" per il Corpus dei papiri Greci di Medicina</i> , Florence, 3–71.
<i>NS</i>	A. Maiuri (1925), <i>Nova silloge epigrafica di Rodi e Cos</i> , Florence.

- PGM* *Papyri Graecae Magicae*, ed. K. Preisendanz, Munich 2001.
- RC* C. Waltz (1934), *Royal Correspondence of the Hellenistic Age*, New Haven.
- RG* L. Spengel, (1853), *Rhetores Graeci I–III* (rep.), Osnabrück.
- SB* *Sammelbuch griechischer Urkunden aus Ägypten*, I, 1915–.
- SEG* J. Hondius, A. Woodhead, H. Pleket and R. Stroud (eds.) (1923–1971), *Supplementum Epigraphicum Graecum* 1–25, Leiden; (1971–1980) 26–27, Alphen; (1982–) 28–, Amsterdam.
- SIG*³ W. Dittenberger (1915–1924), *Sylloge Inscriptionum Graecarum*³, 4 vols., Leipzig.
- SM* Galenus, *Scripta minora*, edd. I. Marquardt, I. Müller, G. Helmreich, 3 vols., Leipzig 1884–1893.
- Syll*³ *Sylloge Inscriptionum Graecarum*, ed. W. Dittenberger, 3rd ed. Leipzig 1915–1924.
- TLG* *Thesaurus Linguae Graecae*, CD ROM #D, Irvine, California.
- TLL* *Thesaurus Linguae Latinae*, CD ROM #5.3, Packard Humanities Institute.

Hippocratic texts are normally cited by reference to the page and line numbers in the most recent critical editions in the *Corpus Medicorum Graecorum* (CMG) or in the *Collection des Universités de France* (Budé), but in all cases the volume and page numbers of the Littré-edition (L.) are listed as well (E. Littré, *Œuvres complètes d'Hippocrate*, 10 vols., Paris, 1839–1861). Thus 4.270 L. refers to vol. 4, p. 270, of Littré's edition. Works of Galen are referred to according to the most recent critical editions in the CMG or in the Teubner series (where these exist), but in all cases the volume and page numbers of the edition by Kühn (K.) are given as well (C.G. Kühn, *Claudii Galeni opera omnia*, 22 vols., Leipzig, 1821–1833, repr. Hildesheim, 1964–1965). Thus 5.244 K. refers to volume 5, p. 244, of Kühn's edition. Details of critical editions can be found in Fichtner (G. Fichtner, *Corpus Hippocraticum. Verzeichnis der hippokratischen und pseudohippokratischen Schriften*, Tübingen 1989; *Corpus Galenicum. Verzeichnis der galenischen und pseudo-galenischen Schriften*, Tübingen 1989). All other abbreviations, unless indicated otherwise, are used according to Liddell & Scott (LSJ, see above), and P.W. Glare (ed.), *Oxford Latin Dictionary*, Oxford, 1982.

PART ONE

THE EPISTEMOLOGICAL CONTEXT
OF HIPPOCRATIC MEDICINE

CAUSE AND CRISIS IN HISTORIANS AND MEDICAL WRITERS OF THE CLASSICAL PERIOD*

Jacques Jouanna

Summary

There is nothing artificial in considering possible points of contact between medicine and history in the classical period: doctors are no strangers to a historical way of thinking, and historians sometimes deal with disease in the course of their historical accounts. This paper studies the notions of cause and crisis as used by the Hippocratic writers and by the historians Herodotus and Thucydides.

INTRODUCTION

There is nothing artificial in considering possible points of contact between medicine and history in the classical period: doctors are no strangers to a historical way of thinking, and historians sometimes deal with disease in the course of their historical accounts.

The *esprit historique* of medical writers is a fairly unfamiliar aspect of classical medicine, and one which it would be interesting to investigate further. In order to establish the basis for a comparison between historians and doctors of the classical period, suffice it here to call to mind two aspects of this historical consciousness of the Hippocratic doctors. On the one hand, they reconstructed a history of the advances of the art of medicine from its origins, just as the historians were able to retrace the steps of civilisation. The history of the art of medicine in the Hippocratic treatise *On Ancient Medicine* has rightly been compared to what is known as the 'Archaeology' of Thucydides.¹ On the other hand, the Hippocratic doctors were historians of disease, not only in compiling case records on individual patients, recording the development of their condition, sometimes day by day, as

* English translation by Christine F. Salazar.

¹ See in particular De Romilly (1966).

in the *Epidemics*, but also in attempting to deduce more general rules on the origin and development of diseases from the observation of individual cases, e.g. in the *Epidemics* or, in a different way, in the treatises *On Diseases*. Thus doctors, *qua* historians of disease, strive to determine its causes, and also to mark its decisive stages.

As far as causes are concerned, it is well known that the medical vocabulary of the Hippocratics is of considerable richness (with the development of the term *prophasis* being particularly striking), and that doctors make efforts not only to confirm the same order of causation for all diseases, e.g. in the *On the Sacred Disease* or *On Airs Waters Places*, but also to distinguish between principal causes and precipitating causes.² Of course, it is still a far cry from the Hippocratic Corpus to the technical terminology of causation as we find it later in Galen under the influence of Aristotelian or Stoic philosophy, but the Hippocratic doctors' reflections on causation are remarkable for their time.

In the development of diseases, the Hippocratic doctors strive to identify its determining moments, and one of the most important words used by Hippocratic doctors to designate these moments is *krisis*. Obviously the word *krisis* as used by the Hippocratic doctors does not have the exclusively pejorative sense of the modern word "crisis". The definition given by one of these doctors, the author of *On Affections*, shows this clearly: "A crisis (*krinesthai*) in diseases is when they increase, diminish, change into another illness, or end."³ Thus crisis is a significant point in the course of a disease, either in the good or in the bad sense. In order to establish the prognosis for the course of an illness, doctors attempted to identify the signs heralding these crises, but also to determine their periodicity. Thus with Hippocratic medicine, both the terminology and the concept of crisis achieve a remarkable degree of elaboration. We may observe that it is in a Hippocratic treatise, *Regimen in Acute Diseases* (*Appendix*) that one first encounters the adjective *kritikon*, "critical", which was to

² I will not cite here the entire abundant literature about causation in the medical writers. For a recent work, see Vegetti (1999), 279–286 on medicine.

³ *On Affections* 8 (6.216, 4 f. L.). Cf. *On Airs Waters Places* 11 (2.52, 6–8 L. = p. 54.1–3 Diller = p. 219, 9 Jouanna): "Diseases are decided (*κρίνεται*) mainly on these days: some cause death, others come to an end, and all the others change to a different form and a different constitution." Here again, I refrain from citing the extensive secondary literature about "crisis" in the Hippocratics. As well as Withington's excellent short note (1920), see *i.a.* Langholf (1990) 81 ff.

have such a long afterlife in our modern languages, albeit with an unfavourable meaning.⁴ It is a mark of the high degree of elaboration of the Hippocratic notion of crisis that between the Hippocratics and Galen one cannot detect a development comparable to the one just pointed out for the notion of cause. Although they would need to be examined more thoroughly, these few basic remarks on causation and crisis will sufficiently illustrate the fact that the Hippocratics are in fact historians of disease.

On the other hand, in the course of their historical narratives, the works of historians contain scattered but valuable information about diseases, or even on doctors and medicine, with varying degrees of exhaustiveness depending on their respective subject or method. Confining myself to the historians who are almost contemporaries of Hippocrates, Herodotus and Thucydides—and one could add Xenophon—Herodotus and Xenophon provide a good deal of references to doctors and medicine, while these are absent from Thucydides.⁵ But even if the historians do not furnish details about doctors or medicine, it is almost inevitable that they encounter disease in their historical narratives—and here Thucydides' description of the plague in Athens is better known than Herodotus' description of the illness of the Scythians, or Xenophon's of *boulimia*.⁶

Summing up, the first step in a comparison between historians and doctors is to see in what ways medical subjects treated by the former are comparable to those dealt with by the latter. This will be the subject of the first part of this paper; here the notion of cause will be essential, while that of crisis will remain supplementary.⁷

⁴ *On Regimen in Acute Diseases* (App.), 1 (2.396.8 L. = p. 68, 19 f. Joly = p. 264.1 Potter): critical sweats; 1 (2.398.6 L. = p. 69, 10 f. Joly = p. 264, 14 Potter): tension of the testicles as a critical sign; 10 (2.456.2 L. = p. 82.21 f. Joly = p. 294.7 Potter): critical sweats; 14 (2.470, 8 L. = 86 7 Joly = Potter 300.24 f.): critical sweats. In this treatise, κριτικός has a favourable meaning; it is a sign that points towards the resolution of the disease.

⁵ On medicine and doctors in Herodotus, see the general studies of Brandenburg (1976) and Dawson (1986). For the connections between Herodotus and the Hippocratic Corpus, see Nestle (1938) 25–27, Lateiner (1986) [n. 53], and, more recently, the significant study by Thomas (2000), ch. 2, 'Medicine and ethnography of health'; I refer the reader to the latter's very rich bibliography for comparative studies dealing with specific issues. See also Jouanna (1994).—For relations between Thucydides and Hippocratic medicine, see Nestle (1938) 28–31; Weidauer (1954); Lichtheim (1965); and more recently Rechenauer (1991), with bibliography.

⁶ Thucydides 2.47–54; Herodotus 1.105 and 4.67; Xenophon, *Anabasis* 4.5.7–9.

⁷ On causation in historians and medical writers, see Vegetti (1999) 276 ff. However, his argument is not based on comparison.

At the same time, the historians also used medicine metaphorically, from two viewpoints. On the one hand, like other authors, mainly poets, then orators and especially philosophers, they referred to the physician's activity as a model of political action. This will be the subject of Part II. On the other hand, they used the doctors' analyses of the course of an illness as an explanatory model of historical development. The third and last part of this paper will therefore investigate a possible transfer of medical notions into historiography, concentrating on the two aspects which form the paper's subject matter, i.e. the notions of cause and crisis.

1. MEDICAL TOPICS IN THE HISTORIANS, COMPARED TO THOSE IN MEDICAL WRITERS

In their descriptions of historical facts as well as in depicting other peoples, the classical Greek historians Herodotus and Thucydides are faced with diseases or nosological states, the accounts of which presume at least a minimum of medical knowledge on their part. It is therefore possible to make connections between the two groups, and at any rate a comparison is relevant where the diseases described by the historians can also be found in the medical writers. Fortunately we can find this kind of correspondences between the historians of the classical period and Hippocratic medicine for each of the three major categories of diseases: individual diseases, diseases specific to an ethnic group and general diseases. It is thus possible to take well-defined examples from each of the categories of disease as our point of departure, in order to consider—beyond the similarities in designation or description of the diseases—the divergences between historians and doctors, in particular in their reflections on the causes.

(a) *An Individual Illness: The Madness of Cambyses and the Sacred Disease*

As an example of individual illness, one may take the madness of Cambyses in Herodotus.⁸ This madness of Cambyses, king of Persia, who had his family—his brother and sister—assassinated, allows

⁸ See Munson (1991) 52–53, for the comparison with the Hippocratic Corpus; on the comparison between this passage in Herodotus and *On the Sacred Disease*, see in particular Thomas (2000) 34–35.

Herodotus to suggest two explanations, settling for neither of them (III, 30–38). The entire story is built around the principal explanation, which is represented as the version given by the Egyptians and is a religious one. The madness is the result of a transgression committed against the Egyptian god Apis, wounded by Cambyses when he appeared in the shape of a bull. However, Herodotus ends by saying:

This is how Cambyses acted against his family in his madness, whether this misfortune had struck him because of Apis or in another way (ἄλλως), given that there are many ills that are wont to beset men. It is said (λέγεται) in fact that from birth (ἐκ γενεῆς *vel* γενετῆς) he was afflicted with a serious disease, which some call the ‘sacred’ (τὴν ἱερὴν ὀνομάζουσί τινες). It is therefore not unlikely that in a seriously ill body the mind (τὰς φρένας) itself could not be healthy.⁹

Thus, whilst recapitulating the divine explanation, Herodotus adds a second possible explanation for Cambyses’ madness: he was the victim not of a sudden crisis of madness, but of a long-term illness manifesting itself in crises—one which, according to Herodotus, some call “sacred”. This designation of the disease in Herodotus is remarkably close to the way in which the author of *On the Sacred Disease* refers to it. In disagreement with the title, which postdates the work, the Hippocratic doctor does not speak of sacred disease, but, as is well known, of the “so-called sacred disease” (τῆς ἱερῆς νοῦσου καλεομένης). And given that the crisis of that disease is described in authoritative fashion by the doctor, the medical evidence allows us to make one of the most definitive retrospective diagnoses of all ancient diseases, and to throw some clear light upon what the historian meant by “sacred disease”: approximately, it is epilepsy.

However, a problem of interpretation arises from this first comparison. There is no doubt that in the medical writer the expression “so-called sacred disease” takes on a specific meaning, since he wants to show that this disease is no more sacred than the others, and that all diseases are explained by a natural cause in one and the same way. Is this true for the historian as well? In other words, what is the relation between the two causes for Cambyses’ madness that Herodotus suggests? When, after a first cause for the madness which is indisputably divine—the vengeance of the god Apis—

⁹ Herodotus 3.33.

Herodotus adds another possible explanation which to us seems more medical, is his intention merely to juxtapose two explanations, or to contrast the divine explanation with a natural one like the Hippocratic doctor? It is difficult to decide with absolute certainty, but the first hypothesis, i.e. the juxtaposition of the two explanations, seems more likely. In fact, Herodotus refers to the multitude of misfortunes that befall men (“given that there are many ills that are wont to beset men”)—and thus to diversity—in order to introduce the second explanation. Moreover, what is the function of the relative clause “the disease which some call the sacred [disease]” (τὴν ἱερὴν ὀνομάζουσί τινες)? Its primary function is to identify the serious illness from which Cambyses is suffering, and we need to remind ourselves that at the time there was as yet no other technical term for that disease. Therefore the relative clause does not necessarily imply a reference to the criticism of the divine by the author of *On the Sacred Disease*, as it has again been assumed recently.¹⁰ Taking all this into account, the mention of a second possible explanation for the madness of Cambyses stems from the desire to make allowance for the diversity of human ills, rather than the wish to contrast divine causation and human causation, as the Hippocratic doctor did.

As well as the first comparison based on the designation of the disease, one could make a second one concerning its origin. Herodotus reports that Cambyses had been suffering from the serious illness ἐκ γενεῆς (*vel* γενετῆς; there is a textual problem which I cannot explain in detail here¹¹). Traditionally this is understood as meaning that it is an illness which he had “from birth”. This notion corresponds to what is said about the so-called sacred disease in the Hippocratic Corpus: it is an illness typical of childhood.¹² Is it possible to push the parallels with Hippocratic medicine, especially with *On the Sacred Disease*, any further? It is well known that the author of *On the Sacred Disease* asserts that the disease is hereditary (κατὰ γένος).¹³ What relation is there between the historian’s ἐκ γενεῆς and the doctor’s κατὰ γένος? Still quite recently, attempts have been made to interpret the

¹⁰ See Thomas (2000) 34.

¹¹ While ἐκ γενεῆς is given by the archetype of the MSS at 4.23.2, the MSS divide between ἐκ γενεῆς (PDRSV) and ἐκ γενετῆς (ABCTM).

¹² *On Airs Waters Places* 3 (2.14.18.5 L. = p. 191, 3 Jouanna) παιδίων with the note *ad loc.*, p. 191, n. 1 (= p. 28.11 Diller θεῖον); see also *Aphorisms* 3.29 (4.500.9 f. L); cf. Aristotle, *De somno* 457 a 8 ff., and see Debru (1982).

¹³ Hippocrates, *On the Sacred Disease* 2 (6.364,15 L. = p. 68, 2 Grensemann).

historian's phrase as synonymous with the medical writer's, by saying that ἐκ γενεῆς means literally "of the family", i.e. "by heredity".¹⁴ The problem would merit more detailed investigation, but in the surgical treatises, where the expression ἐκ γενεῆς is frequently used, it clearly has the meaning "from birth".¹⁵ Of course the idea that a disease has been present since birth (ἐκ γενεῆς) is not incompatible with that of heredity (κατὰ γένος), but it does not necessarily imply it.¹⁶ There is nothing in Herodotus that permits us to assume the existence of a theory of heredity based on the idea that semen comes from all parts of the body, as we find it in the Hippocratic treatise. Obviously it is not possible to make an absolutely definitive decision *e silentio*. At the same time, one has to be careful not to overinterpret the historian's text under the pretext of explaining it by a comparison with medical technical literature.

The third possible parallel regards the probable relationship which Herodotus establishes between a serious illness of the body and an affection of the mind. Now this cause-effect relationship between the disturbance of the body and that of the mind is in agreement with Hippocratic thinking, and in particular with that of the author of *On the Sacred Disease*, who explains the different types of madness by the different states of a part of the body, namely the brain.¹⁷ However, here again it does not appear that there could be a direct reference to *On the Sacred Disease*, because Herodotus uses the term τὰς φρένας to designate the "mind", while the author of *On the Sacred Disease* explains at length that the φρένες cannot be the source of thinking. The way in which Herodotus designates thinking is rather what the Hippocratic doctor criticises.

¹⁴ See Thomas (2000) 34–35, with n. 9.

¹⁵ See *Index Hippocraticus*, s.v. γενέη I. *ortus*; see also s.v. γενετή.

¹⁶ In certain passages in the Hippocratics it is clear that ἐκ γενεῆς does not literally mean "by heredity". For example, the author of *On Joints* explains in ch. 12 (4.114, 1 L.) those who are called *galianrones* ἐκ γενεῆς by an accident in the womb. In this case there can be no question of heredity. In Herodotus 4.23 the notion of heredity may be implicit, but the Hippocratic text is descriptive: "all are bald from birth (ἐκ γενεῆς *vel* ἐκ γενετῆς), men and women alike". Thomas' criticism (2000, 39, n. 9) of von Staden (1990), who rightly compares the uses in Hippocrates and Herodotus in order to defend the traditional sense of ἐκ γενεῆς (pp. 94–5, with n. 44), seems unconvincing. It could be said, though, that it would be better to invert the comparison made by von Staden, elucidating the meaning of ἐκ γενεῆς in Herodotus by Hippocrates rather than vice versa.

¹⁷ Hippocrates, *On the Sacred Disease* 14 (6.386, 15 ff. L. = p. 82, 12 Grensemann).

After a critical re-examination of these comparisons, what conclusions can one draw about the relation between Herodotus and the treatise *On the Sacred Disease*? Must one infer that Herodotus knew the treatise and makes a clear allusion to it? Caution is called for, as the sources that were at his disposal are lost. There is nothing that makes it mandatory to assume a direct reference to a treatise which, after all, need not necessarily be prior to Herodotus. It is more natural to believe that Herodotus relied on a historical source for this information about Cambyses, as the use of the verb λέγεται suggests.

In contextual studies, one of the pitfalls to be avoided is to rush the process of comparison in order to decide on a direct influence. Yet at any rate, we have an example of an individual illness whose depiction by a historian can be fully understood only in comparison with the testimony of a doctor dealing with the same disease.

(b) *The Disease of a People: the Impotence of the Scythians*

Let us now move on to a disease that is peculiar to a people. The example used here is the disease of the Scythians in Herodotus, because—just as for the so-called sacred disease—there is a parallel in a Hippocratic treatise. As it happens, it is very likely that this treatise was written by the same author as *On the Sacred Disease*: I am speaking of *On Airs Waters Places*.¹⁸ Let us first look at the way Herodotus represents it. The historian speaks about this disease of the Scythians in two passages of his *Histories*. In the course of a long ethnographic account about the Scythians, on the occasion of Darius' campaign against them, he remarks that they have many soothsayers. Among those, at 4.67, he mentions the Enareis; he calls them female men, adding that they claim that their gift of prophecy comes from the goddess Aphrodite. This information must be understood in the light of an earlier passage in the *Histories*, which provides a historical dimension (1.105). During the Scythians' campaign against Egypt, some soldiers of the rear-guard pillaged the temple of Aphrodite at Ascalon in Syria, and this is what happened to them as well as to their descendants:

¹⁸ On the question of the author's identity, see Jouanna (1996) 71–73. For literature on the disease of the Scythians up to 1993, see *ibid.*, pp. 334 f. (n. 3 on p. 238). See also Lieber (1996); West (1999), in particular 29 f.; Thomas (2000) 33 f.

The Scythians guilty of pillaging the temple of Ascalon and their descendants after them forever, were struck by the goddess with an illness that makes them women. So the Scythians say that they are ailing because of this, and travellers coming to Scythia can see for themselves the condition of these men, whom the Scythians call Enareis.

According to this passage, it appears that the disease of the Scythians called Enareis is a hereditary disease, due to divine vengeance, which makes the men impotent. However, by way of compensation, these “androgynes” have the gift of prophecy, which they owe to the deity. In these two passages, Herodotus limits himself to reporting what the Scythians themselves say about their complaint, without intending to cast doubt on their religious explanation. The Hippocratic treatise *Airs Waters Places* (ch. 22), too, contains a long exposition on this disease of the Scythians, which allows us to compare with great accuracy the concept of causation in the historian and in the medical text. I shall emphasise the main points, without going into the details of the comparison. The Hippocratic author agrees with the historian on the point that the locals attribute the cause of the illness to a deity. This is what he says:

There are men similar to eunuchs in great numbers among the Scythians. They do women’s work and have a voice resembling that of women. These men are called Anarieis. The natives on their part attribute the cause to a deity, and worship these persons and prostrate themselves before them, each fearing for himself.¹⁹

Despite a small divergence in the name for these Scythians between the historian and the doctor (Enareis in Herodotus, Anarieis in Hippocrates), the condition is identified in the same way: these Scythians resemble women. The cause advanced by the natives is the same, too: it is an illness caused by a specific deity. But beyond that, their ways part. While the historian limits himself to reporting the explanation for the disease as given by the natives, the Hippocratic author distances himself, presenting his own opinion as follows:

As for myself, I also think that these afflictions are divine as well as all the others, and none is more divine or more human than another, but that they are all alike and all divine. Each of them has its own nature, and nothing arises without nature.²⁰

¹⁹ Hippocrates, *On Airs Waters Places* 22 (2.76, 12–16 L. = p. 72, 10–14 Diller = p. 238, 6–12 Jouanna).

²⁰ Hippocrates, *On Airs Waters Places* 22 (2.76, 16–78 L. = p. 72, 14–17 Diller = p. 238, 19–239, 1 Jouanna).

The Hippocratic author's position is of such subtlety that it could easily lead a modern mind astray.²¹ The Hippocratic doctor appears to concede that the disease is divine, but in fact he does not believe that a specific deity could provoke an illness. For by reducing all diseases to one and the same order of causality, and by assimilating the divine and the natural, the doctor replaces the concept of a divine justice sanctioning the individual's guilt with a disease that is transmitted to his descendants by an order of the universe which is at the same time divine and natural and which comprises diseases, thus releasing the sufferer from all guilt. Subsequently, the medical author explains in detail what, according to him, is the cause of the Scythians' impotence. It lies in their lifestyle: they are constantly riding on horseback, an activity which modifies the seminal ducts. The treatment which they use does more harm than good: at the beginning of the disease, they cut the blood-vessels behind the ears, but, according to the author, this operation changes the pathways of the seminal fluid. Thus this new, rational conception of the divine discards any anthropomorphic representation from the cause of the disease. This passage on the cause of disease is a major milestone in the history of ideas: together with *On the Sacred Disease*, it is the first testimony of a rationalist explanation of disease, even if the flexibility of this rationalism associates notions—the natural and the divine—which might appear diagonally opposed to 19th-century rationalism.

One can find nothing comparable in Herodotus. If one calls to mind that in the case of the madness of Cambyzes the historian juxtaposes two explanations—one based on divine causation, the other on a more natural one—while here he limits himself to the divine causation of the Scythians' disease, one could contrast the historian's flexibility about causality with the consistency of the doctor, who adopts one and the same position on the disease of the Scythians and on the so-called sacred disease.²²

However, the comparison between historian and doctor is illuminating not only for understanding the former's position, as was the case with the individual illness of Cambyzes. In the case of the disease of the Scythians, Herodotus in his turn sheds light on the doc-

²¹ On the nuanced position of the author of *On the Sacred Disease* with regards to the sacred, see Jouanna (1989) 11–14.

²² On Herodotus' flexibility when it comes to causation, compared to the medical writers, see (concerning general diseases) Demont (1988), especially pp. 12 ff.

tor. For if it appears that the historian is unaware of the doctor's rationalist explanation, the latter in his turn leaves out an element mentioned by Herodotus, which is unlikely to have been unknown to him, namely, that the impotent Scythians were soothsayers. The doctor's silence on their gift of prophecy probably stems from the fact that it did not fit in with his explanation of the disease. Certainly the gift of prophecy could feature along with impotence in the concept of a historian who believed in the distribution of inconveniences and advantages by divine providence. However, it has no place in an explanation of the disease by a lifestyle the physical consequences of which have no connection with spiritual gifts. It is interesting to see here how the doctor's rational aetiology affects the representation and selection of the facts which he keeps in the story.

(c) *A General Disease: the "Athenian Plague"; Causes and Crises*

Let us now pass on to the example of a general disease. Leaving Herodotus behind, we move on to Thucydides,²³ and obviously what catches the eye is the so-called "plague" of Athens.²⁴ This disease has given rise to an immense body of learned literature, in particular among historians of medicine, who have competed to establish a retrospective diagnosis.²⁵ We do not intend to enter into these discussions, which are bound to remain hypothetical as well as controversial, but to compare, according to the perspective of this paper, the notions which the historian and the contemporary physicians have of the cause of the disease as well as its crisis.

The starting-point here is a fairly paradoxical situation. Although plagues are mentioned by the Hippocratic physicians, in the medical literature of the classical period it is impossible to find a description that is as precise and extensive as that in Thucydides. And one can generalise this observation by quoting what Mirko Grmek says in his ground-breaking work *Diseases in the Ancient Greek World*:

²³ On pestilence in Herodotus, see Demont (1988).

²⁴ Thucydides 2.47–54. It would be better to call it "pestilence", because it appears that the plague caused by Yersin's bacillus was not yet known in classical Greece, but for the sake of convenience we shall continue to speak of "plague" in quotation marks.

²⁵ There is an enormous amount of literature about the "plague" of Athens. See in particular Poole and Holladay (1979), with a convenient overview of the retrospective diagnoses that have been suggested.

“I note that the best accounts of exceptionally serious epidemics in antiquity are not provided by professional physicians but by historians or other men of letters. It is enough to mention Thucydides’ account of the ‘Great Plague’, which was an event of decisive importance for the outcome of the Peloponnesian War and the future of Athenian imperialism.”²⁶

While there are wonderful descriptions of individual illnesses in the Hippocratic Corpus, there is nothing comparable to a pestilence—even though there are admirable descriptions of general diseases in the *Epidemics* as well.²⁷ Seen from this point of view, the historian seems superior to the doctor here. Thucydides is, in fact, conscious of being a first-hand witness, mentioning that he himself was struck by the disease and that he saw many others suffering from it around him.²⁸ Thus he makes two important medical observations of which there is no trace in the contemporary medical writers: on the one hand, the contagion by contact, on the other the immunity of those who, like Thucydides, have survived a first attack of the illness.²⁹ This does not mean that the historian did not seek information from doctors, and elsewhere in his description he refers explicitly to the expertise of doctors with regard to the different evacuations of bile for which they have names.³⁰ With good reason, scholars have detected in Thucydides’ description the technical vocabulary typical of medical writers,³¹ and it is not surprising to find among these technical terms some that refer to crisis and cause. These two words can be found united in the same context when Thucydides investigates the way in which the disease started in individuals:

Among those who were already ill, all kinds of diseases were decided by changing into this one (ἐξ τοῦτο πάντα ἀπεκρίθη), while among the others, from no apparent cause (ἀπ’ οὐδεμιᾶς προφάσεως) but suddenly,

²⁶ See Grmek (1989) 16.

²⁷ See Grmek (1989) 305: “The Hippocratic report on what has been called, since Littré, the ‘cough of Perinthus’ is a basic text that should be considered a paradigm in any historical, philological, or medical study of Greek epidemiology in the classical period, alongside the ‘plague of Athens’ and the *katastáseis* of Thasos.”

²⁸ Thucydides 2.48.3.

²⁹ See Poole and Holladay (1979) 295 ff.

³⁰ Thucydides 2.49.3.

³¹ See in particular Page (1953). Parry (1969) takes the opposite view, claiming that Thucydides avoids technical terminology. The influence of medical terminology is summed up sensibly in Radt (1978), especially 242–245 (“Einfluß medizinischer Terminologie”).

there appeared first of all great heat in the head, redness of the eyes and inflammation.³²

The compound verb ἀποκρίνω indicates that all the illnesses that had been present before the plague were subject to a crisis which transformed them into the newly arrived disease. This compound of κρίνω has the same meaning as the simple verb in the Hippocratics.³³ One of the definitions of crisis provided by the author of the Hippocratic *On Affections*, ch. 8, is just that: the transformation of one disease into another. The word πρόφασις here has precisely the meaning of apparent or precipitating cause, as we find it in some passages of the Hippocratic Corpus. In one Hippocratic writer, the author of *Epidemics VII*, we even have—in the form ἐξ οὐδεμιῆς προφάσιος—the exact equivalent of Thucydides' expression ἀπ' οὐδεμίας προφάσεως, in the analogous context of the onset of an illness.³⁴ Thus, by using it this way, the historian links up with the doctors. One must not think, however, that the medical passage preserved in the Hippocratic Corpus was the exact model that Thucydides used, because the treatise *Epidemics VII* is of a clearly later date than the historian.³⁵

When it comes to determining the actual cause of the pestilence, though, Thucydides keeps his distance from the doctors, retreating to a position that could be qualified as sceptical *avant la lettre*. Having scrupulously described where the disease came from, its origin in Ethiopia, its spread through Egypt, Libya and large parts of the Persian Empire, and then its arrival by the port of Piraeus, he goes on to say:

"Let each one, doctor or layman, as each knows it, speak about [the disease], from what it was likely to have originated, and the causes

³² Thucydides 2.49.1–2.

³³ Page (1953) 107, devotes 22 lines to a study of ἀπεκρίθη and its parallels in the Hippocratic Corpus. He starts from the meaning that the compound verb has in the medical writers, i.e. one of "separating" (in the intransitive sense), especially when speaking of a humour in the body separating from the others. However, this approach does not produce a satisfactory meaning in Thucydides. It is better to take as one's starting-point the technical sense of the simple κρίνεσθαι in the medical texts ("to have a crisis", "to be judged", relating to an illness) and to understand the prefix ἀπο- as the idea of departure from one state in order to pass into another.

³⁴ Hippocrates, *Epidemics VII*, ch. 120. I regret not having pointed out this parallel in the edition of *Epidemics V–VII* (Jouanna and Grmek (2000)).

³⁵ *Epidemics VII* dates from the decade 358–348; see Jouanna and Grmek (2000) XXXIX–XLV.

(τὰς αἰτίας) which he believes to have been sufficient for such a great vicissitude. But I shall say how it took its course, and reveal [the signs] from which—should it ever attack again—a person on seeing them would be best able to recognise it, having knowledge beforehand: I had the disease myself, and myself saw others suffer from it.”³⁶

Here the historian makes a clear distinction between the cause of the disease and its description, and he adopts radically different attitudes towards the former and the latter: he limits himself to the description of what is visible or perceptible, leaving it to others to formulate hypotheses about the causes. He provides his personal experience for the description of the symptoms, whilst parting company with the doctors on the evaluation of the causes. He does, however, state their inability to treat the disease.³⁷

The originality of Thucydides’ position on the question of the causes of the disease becomes even more noticeable when compared with that of the doctors of the Hippocratic Corpus. Of course, here we are not as lucky as with the disease of the Scythians reported by Herodotus: no ancient Hippocratic text speaks of the “plague” of Athens. However, there are mentions of pestilences in general, that is, of diseases that strike down the inhabitants of the same city at the same time. Unlike the historian, the Hippocratic physicians suggest causes. Depending on the treatise, one of two explanatory models is proffered—either the influence of the seasons or the presence of disease-generating miasma in the air.³⁸ Perhaps Thucydides is unobtrusively referring to the first model when he recalls that the year was a healthy one (2.49). If this is the case, then it is in order to suggest that this explanatory model cannot be applied to account for the existence of the disease,³⁹ as the mention of the wholesome year only serves to reinforce the altogether exceptional character of the “plague”, which in Thucydides’ view is essential. He remains silent, though, on the other model, which he probably must have

³⁶ Thucydides 2.48.3.

³⁷ Thucydides 2.47.

³⁸ On these two explanatory models, see Jouanna (2001).

³⁹ Nevertheless, the heat of the summer was an aggravating circumstance (2.52), as was the overcrowding. It seems impossible to deduce from the reference to the “plague” in book 1 (23.3) that it is caused by the droughts in the same way as the famines, as the scholiast and some modern scholars do (cf. Demont (1983)). This would make Thucydides contradict himself, since he says explicitly in his account of the “plague” that he does not want to take sides regarding the problem of causes. At 1.23.3, only the famines are caused by the droughts.

known as well, that of miasma carried by the air. This model could have been applied to the “plague” of Athens—witness the way in which the physician Galen read Thucydides’ text in the second century AD. While Thucydides merely states that the plague had come from Ethiopia, Galen translates this into “putrefying miasmata” arriving from Ethiopia.⁴⁰ It is remarkable to see a doctor reading Thucydides’ work and bringing in the Hippocratic miasma theory where the historian had refused to take a stand on the cause.

As a matter of fact, the miasma theory could not suit the historian, given that it did not square with his observations concerning the propagation of the disease. According to the Hippocratics, miasma contained in the air is transmitted by respiration and not by contact; this was a reaction against the religious concept of the transmission of impurity by touch. Thucydides on his part observed that the disease attacked mainly those who were in contact with the sick, and especially the doctors.⁴¹ Thus the historian’s observation is not constricted by the implications of medical aetiology. One could add that, despite its relevance, this medical observation made by the historian was not adopted by Greek doctors. And it has been said that the development of medicine would have been decidedly different if Greek doctors had taken Thucydides’ observation into account.⁴²

Summing up, one can see the historian’s relatively independent position *vis-à-vis* the doctors, despite the accuracy of his technical vocabulary, which proves his thorough knowledge of the medical literature of his period.

2. METAPHORICAL USE OF MEDICINE AS A MODEL OF POLITICS IN THE HISTORIANS

Let us now turn to the metaphorical use of medicine in the historians. Medicine is used in two ways, both as a model for politics and through the transfer of the method of medicine into historical methodology. Part 2 looks at the use of medicine as a model for politics.

⁴⁰ Galen, *On the Differences of Fevers* 1.6 (7.290 K.); see Jouanna (2000) 73.

⁴¹ Thucydides 2.47.

⁴² Poole and Holladay (1979), 300. On the observation of contagion in Thucydides, see the above, then the discussion of Solomon (1985) and the pertinent reply of Holladay (1987).

The use of medical metaphor as a model for the political was not the historians' creation: it was there already in archaic poetry, tragedy and even comedy. It was to continue in the orators and become systematical in the philosophers, in particular in Plato, but also in Aristotle.⁴³ In its most elaborate form, this analogy—whether used as a metaphor or as a comparison—has two pairs of mutually connected terms, which one could describe as follows: The politician is to the city what the doctor is to the body. The oldest passages in which this analogy appears in a relevant way date to the end of the first half of the fifth century. In the fourth *Pythian Ode* (of 462–461), Pindar compares the king of Cyrene, Arcesilaus IV, to a physician (v. 270 ἰατὴρ), who must treat the city wounded by the exile of Damophilus with gentleness. Aeschylus in the *Agamemnon* (of 458) presents king Agamemnon, who wants to restore order in his city, as a doctor who, if necessary, will use forceful remedies, cutting and burning (vv. 848–850). Already in these two examples the metaphor's two main characteristics become apparent. The first is that the metaphor of the leader-as-doctor emerges specifically in moments of crisis, when the ailing city needs the intervention of a physician; the second consists in the flexibility of the analogy in its use and even in the possibility for contradictory applications, insofar as the leader-as-doctor can intervene by a gentle treatment or by forceful means. One can observe this in Thucydides in a medical metaphor which comes at the end of the confrontation between Nicias and Alcibiades at the moment of the Sicilian campaign. It is truly a crisis situation: the city has decided on the expedition, but in a people's assembly called together to deliberate on the means, Nicias questions the decision of the departure itself, inviting at the end of his speech the prytanis to have another vote. The end of this address, which is also the end of Nicias' speech, is taken up by a medical metaphor:

Consider, if you fear to put it to vote again, that to annul the laws in the presence of so many witnesses would involve no guilt, and on the other hand, that you would become a physician to the city which has made a [bad] decision, and [consider] that this is what governing well is about: to be of use (ὠφελήσῃ) as much as possible to one's country, or at least not to harm it (βλάψῃ) willingly.⁴⁴

⁴³ See Jouanna (1978) and (1980a).

⁴⁴ Thucydides 6.14.

Like the king in Pindar or Aeschylus, the prytanis in Thucydides has to be the physician of the city, which is ill because it has made the wrong decision. The medical reference is more than just a trivial allusion. Here, too, a comparison with medical literature makes it possible to arrive at a more in-depth interpretation of the historian's text, because the definition of the ideal politician given by Nicias just after the medical metaphor is a transposition of the Hippocratic ideal of the good physician. In the famous words of the Hippocratic treatise *Epidemics I*: "to have two things in mind in diseases: to be useful or not to harm (ὠφελεῖν ἢ μὴ βλάπτειν)." Thus the same antithesis—"to be useful/not to harm", using the same Greek terms (ὠφελεῖν/βλάπτειν)—can be found in the historian and in the medical author. Therefore the medical reference in the political discourse can be implicit after the signal given by the explicit metaphor. Comparison with the extant medical literature remains the only criterion of this implicit reference.

By this method it becomes apparent that the implicit medical reference is not limited to the end of Nicias' speech, but continues in that of Alcibiades, which represents the other component of the antilogy, and in particular the end of the speech, responding to the end of Nicias' speech. This is its final section (6.18.7):

Altogether, I declare that it seems to me that a city not accustomed to inactivity would very quickly be ruined by a change to inactivity, and that those men live most securely who, as citizens, diverge least from the existing customs and laws—even if these are not so good (ἢ καὶ χεῖρῳ ἦ).

One can see at the first reading how the two arguments are opposed to each other. While in Nicias' opinion one must not hesitate, when the city's decision is wrong, to act energetically with the objective of healing and saving it, even to violate its laws, for Alcibiades on the other hand, the safest policy is not to change the customs and laws of a city, even if they are bad, because an excessively radical change would lead to its ruin. This warning against change can be fully understood when comparing it with contemporary medical literature, as it has an exact parallel in a warning against changing one's habitual diet in a Hippocratic treatise, *On Regimen in Acute Diseases*. This passage from the Hippocratic treatise (36) may be compared with the final section of Alcibiades' speech (ch. 18):

... people support well food to which they are accustomed, even if it is not good by nature (ἦν καὶ μὴ ἀγαθὰ ἢ φύσει); the same is true for drinks; on the other hand, they support with difficulty food to which they are not accustomed, even if it is not bad; the same [is true] for drinks.

The accustomed regimen of the city is good in the politician's view, as the accustomed diet of the body is in the doctor's, even if it is not good as such. Thus a comparison of the final passages of the two speeches with the medical writings demonstrates that underneath the political debate about the modalities of the politician's actions on the city there is a constant network of references to the physician's actions on the human body. However, in the historian the medical model is dramatised. There is a contrast between two types of politics which appear to be the mirror images of two forms of therapy, within a discourse focused on change and habit. For the good of the city, one approach wants to change habits radically, the other to preserve them. It is an intriguing detail that Thucydides, in a sophistic twist, puts the conservative argument in the mouth of the young Alcibiades, for the purpose of adventure, and the one for change in the mouth of the elderly Nicias, whose aim is prudence.⁴⁵ A similar discourse on political change, with a reference to the medical model, would be taken up by the philosophers, most famously by Plato in the *Laws* and Aristotle in his *Politics*.⁴⁶

3. THE TRANSFER OF THE MEDICAL MODEL INTO THE CONCEPT OF HISTORICAL DEVELOPMENT—FROM CAUSE TO CRISIS

In the third and last part, let us approach the problem of determining if the historians of the classical period could have been influenced by medical literature above and beyond their description of medical facts and the political use of these, and if they succeeded in importing the medical model into their explanation of historical development—in particular in transferring the notions of cause and crisis.

⁴⁵ For more detail on the comparison between this contrast in Thucydides and Hippocratic medicine, see Jouanna (1980b).

⁴⁶ Plato, *Laws* VII 797 d 9 ff.; Aristotle, *Politics* 1268 b 25–1269 a 28. For a comparison of the uses of the medical model in the three passages in Thucydides, Plato and Aristotle respectively, see Jouanna (1980a).

This question arises for Thucydides only: as we have seen, causation in Herodotus, still marked by a belief in divine intervention in human affairs, cannot be compared with Hippocratic rationalism. The rationalism of Thucydides, on the other hand, has long been compared to that of the Hippocratic doctors. The most recent overview of this subject is that by Georg Rechenauer, published in 1991, with the title *Thukydides und die hippokratische Medizin*. The subheading, *Naturwissenschaftliche Methodik als Modell für Geschichtsdeutung*, reveals the author's intention of showing the influence of the medical method on Thucydides' concept of historical-political development. The author of this extensive study concludes (on p. 364) by saying that "Thucydides was influenced to a large extent by contemporary medicine".⁴⁷

The question of influence is always a delicate one, especially if one calls it a transfer. One needs to remain very cautious both about the influence of tragedy on Herodotus and about that of medical literature on Thucydides.⁴⁸ We have seen that, even when discussing the "plague" of Athens, Thucydides can diverge from medical literature whilst knowing it full well, on the subject of the causation of the disease. However, we have also seen how, in his exposé on the disease, he uses the term *πρόφασις* in its technical sense to indicate the "apparent or precipitating cause" in a phrase that resembles a doctor's. Now, when Thucydides speaks of the cause of the Peloponnesian War, he also uses the word *πρόφασις* in a sense that deviates from the supposedly usual one of "pretext". The most famous passage is the first use of *πρόφασις* in his work, i.e. the famous expression in bk. 1, ch. 23, 6, *τὴν ἀληθεστάτην πρόφασιν, ἀφανεστάτην δὲ λόγῳ*, meaning: "the truest *prophasis*, but the one that is most hidden in the word[s]". By this expression Thucydides designates that which is contrary to the accusations and differences (*τὰς αἰτίας . . . καὶ τὰς διαφοράς*) as manifest in the words. As we know, this *ἀληθεστάτη πρόφασις* is the Lacedaemonians' fear of the increasing power of Athens, which drives them to go to war. Thucydides uses the same

⁴⁷ Rechenauer (1991), also cited in n. 5. This comparative study deals basically with the notions of cause (*πρόφασις*) and nature (*φύσις*).

⁴⁸ Chapter III ("Thucydides") of Cochrane (1929), 14–34, is devoted to the influence of Hippocrates on Thucydides (cf. p. 16: "It is our contention that the analogy goes much deeper than mere style; that, in fact, Thucydides adapted the principles and methods of Hippocratic medicine to the interpretation of history; and to the demonstration of this the rest of this chapter must be devoted."). This study, which is considered ground-breaking, is certainly too optimistic when it comes to the influence of Hippocrates on Thucydides.

expression (τῇ ἀληθεστάτῃ προφάσει) again in his explanation for the Athenians' expedition to Sicily (6.6.1) for qualifying their desire to conquer all of Sicily—distinguishing it from the noble pretext, i.e. the wish to come to the aid of their allies and ethnic relations. Traditionally, these two uses of ἀληθεστάτη πρόφασις have been seen as an influence of medical usage, since, as we know, in the medical writers the term πρόφασις is used not only to designate apparent or precipitating causes, but also the cause as such. For example, in the treatise *On the Nature of Man*, ch. 9, it is stated that the doctor must “make the treatment by counteracting the cause of the disease” (τῇ προφάσει τῆς νόσου).⁴⁹

Nevertheless, I should like to make the following remarks concerning the traditional hypothesis about the influence of medical usage. While this is not the place for broaching the wide-ranging problem of the diversification of the meanings of πρόφασις—from its etymological sense of “act of showing”, “act of showing oneself”⁵⁰—or for dwelling on Thucydides' deliberate play on the manifest and the hidden, which constitutes the true originality of the expression,⁵¹ there remains a difference between the doctor's objective use of “cause” and the historian's subjective use of “motive”. The ἀληθεστάτη πρόφασις means “the truest motive”, i.e. the one that necessarily drives someone to go to war. Now, there is no need to make the detour via the technical medical sense in order to reach this meaning of “motive” for an action. Taking all this into account, the influence of medical vocabulary on the notion of cause in Thucydides is not all that evident.

What about the notion of crisis then which, as we know, has such a strong presence in Hippocratic medicine when discussing the course of an illness? This is a question worth asking about Thucydides,

⁴⁹ On the meaning of πρόφασις in this passage, see Jouanna (1975), 291 f. (with n. *ad loc.*).

⁵⁰ There are quite a number of studies about πρόφασις and about the interrelations of its uses in Hippocrates and Thucydides: Rechenauer (1991), 38–111 (with the bibliography). Also Irigoien (1983) 176–79 is fundamental for the first meaning of πρόφασις, and Vegetti (1999).

⁵¹ By qualifying πρόφασις as ἀφανεστάτη, Thucydides consciously combines two opposites derived from the same root. And in terming it ἀληθεστάτη, he creates another combination of words, the idea being to contrast a proclaimed motive for action (πρόφασις) with a hidden, truer, motive. See, again in Thucydides, 6.34.6, πρόφασιν μὲν opposed to τὸ δὲ ἀληθές. The originality of the expression here owes more to rhetorical activity than to the influence of medicine.

given that modern historians have often termed him a “historian of crises” (*Krisenhistoriker*).⁵² Has the medical sense of κρίσις taken hold in his work for the analysis of historical development? An investigation of the different uses of the term κρίσις in Thucydides yields the following results: six of a total of seven uses have the usual sense of “judgement”, but one occurrence only merits closer attention. It is the passage where Thucydides compares the Persian War to the Peloponnesian War in order to show that the latter was more important (1.23.1):

The greatest event of those before was the Persian War, and yet it had a speedy crisis (ταχεῖαν τὴν κρίσιν ἔσχεν) by two naval battles and two land battles. This war, on the other hand, was protracted to a great length, and during it misfortunes befell Greece as they had never occurred in an equal period of time.

This use of the term to describe a war which comes to a rapid crisis, i.e. a rapid solution, is reminiscent of what one can read about an illness in the medical treatises. This, for example, is what we find in the *Coan Prenotions*, concerning the eyes:

Clearness of the eyes and the white of the eye that becomes clear, having been black or livid, are critical (κρίσιμον); also, when the eyes become cleansed quickly, this signifies a rapid crisis (ταχεῖαν σημαίνει κρίσιν), and when [they become cleansed] slowly, [this signifies] a slower [crisis].⁵³

One can compare the use of the same expression, ταχεῖαν σημαίνει κρίσιν, in the medical writer and the historian respectively, in the former case for the rapid termination of a disease, in the latter for that of a war. Thus war can be likened to an illness, the termination of which is more or less rapid.

Nevertheless, the significance of this comparison should not be exaggerated. Despite the identical expression, one can see differences: while the historian limits himself to stating a fact—the rapid crisis of a single given war—the doctor takes the observation of several given diseases as his starting-point for a prognosis of the greater or lesser rapidity of the crisis according to the appearance of signs.

⁵² In his study on Thucydides and Hippocratic medicine, Rechenauer (1991) devotes a section to “Thukydides der Krisenhistoriker”, pp. 264–273, referring to studies on Thucydides in which the word “crisis” appears in the title. He does not, however, ask any questions about the use of the term κρίσις in this historian.

⁵³ Hippocrates, *Coan Prenotions* 213 (5.630, 11–14 L.).

Thucydides' concept of crisis is not incorporated into a system explaining the development of historical events. And finally, this isolated occurrence of the technical use in Thucydides bears no relation to the 170 examples of a technical use of κρίσις in the Hippocratics. Furthermore, unlike the doctors, the historian does not know the plural of the word—crises. Thus, in short, one cannot really speak of a transfer of the notion of crisis in the historians of the classical period. It is likely that this transfer did not yet occur in antiquity, but rather that it happened only in modern times—more precisely in the 19th century, when people begin to speak of a political, financial or commercial crisis, until we finally come to the crisis *par excellence*, the crash of 1929. There is a risk, therefore, when speaking of crisis with regard to ancient history, of using a concept that has no exact equivalent in the ancient historians, and of transposing—more or less consciously—into the domain of history a concept which at the time was definitely valid in the domain of medicine only.

This does not mean that one has to refrain from using the concept of crisis when studying the ancient historians. However, in doing so one has to be aware of applying to the ancient historians a concept originating in medicine, which was known to them, but which they did not transfer into their thoughts on history.⁵⁴

CONCLUSIONS OF THE COMPARISON AND THE CONTEXTUAL ANALYSIS

The result of this critical re-examination is that a comparison between historians and doctors of the classical period is pertinent as long as it is not limited to generalities,⁵⁵ but is based on precise comparisons of specific texts, and as long as one does not attempt to resolve the comparison in simplistic terms of the influence of Hippocratic writ-

⁵⁴ It would be the object of another paper to make an inventory of the Greek terminology corresponding to what we call crisis in the historians of the classical period.

⁵⁵ Lateiner's essay (1986), which aims to compare Herodotus' method and that of the Hippocratic doctors, does not examine the truly comparable passages, and the conclusions it leads to are too general for being pertinent (p. 18: "In contrast to both their predecessors and successors, and despite the difference of their materials, some medical writers and Herodotus display common attitudes, positive and negative, towards the methodical understanding of some aspects of truth and reality.").

ings on the historians. Some sources—historical as well as medical—have after all been lost.

Sometimes the differences are more significant than the similarities. Hippocratic rationalism has not—or not completely—penetrated Herodotus' thinking about causation for the explanation of diseases, since the historian still believes in divine intervention into human affairs. And even if Thucydides, whose rationalism can be compared to that of the Hippocratic physicians, is perfectly well informed about medical concepts such as the "precipitating cause" or the "crisis" of an illness, there is an important difference in the historian's refusal to make a statement about the initial cause of the "plague" in Athens. Less shackled by a systematic causality than the Hippocratic doctors, the historians—be it Herodotus or Thucydides—were able to report information or make observations about diseases which the doctors had not considered relevant because they did not agree with their theories. The indirect use of medicine as metaphor in the political domain fits into a tradition already familiar from poetry: in Thucydides' discourse it appears in a moment of "crisis" of the city. It attests the prestige of the physician, who appears as the saviour. As for Thucydides' transfer of medical concepts well known to him into his historical method, it is more delicate to establish than one would normally assume, and remains problematic where the notion of crisis is concerned, perhaps even for the notion of cause.

Let me finish this attempt to compare historians and medical writers with a remark on methodology. The contextual method, based on comparison, can be very fruitful, as long as one can resist the temptation to do violence to the texts for the purpose of comparison, that is, as long as one respects the internal logic of each genre or of each author.

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HIPPOCRATIC EXPLANATIONS

Jane Barton

Summary

This paper considers VM's largely unrecognised contribution to a debate which spanned philosophy and medicine concerning the demands an adequate explanation must meet in the operation of a craft. VM's special contribution consists in indicating a means to an understanding of a mutual interdependence of theory and practice which acknowledges the strengths of a theoretical explanatory framework, but also recognises that practical success should inform that theory.

In this paper, I shall consider some of the most developed views of what demands must be met by an explanation of what health, disease and the operation of the medical craft are within the Hippocratic Corpus, concentrating on the work *On Ancient Medicine* (Περὶ ἀρχαίης ἱητρικῆς, *De vetere medicina*, VM). The purpose of this investigation is to bring to light some of the explanatory problems which would have faced philosophers who sought to provide a coherent theory of the nature of medical science, and to highlight the difficulties faced by the Hippocratics in answering one of the challenges posed by philosophers. The particular challenge with which I am concerned focuses on the search for an adequate explanation: how an adequate explanation would be structured, and, further, how an adequate explanation would be recognised as such.

The philosophical challenge, as it emerged from the works of Presocratics such as Empedocles, was based on Presocratic frameworks of explanation.¹ Empedocles' explanatory framework was seen

¹ Those belonging to the Empedoclean school of medicine seem to have made the four chief elements, earth, air, fire and water, as the basic constituents of the cosmos, also the basic constituents of disease: disease was the excess of one of these constituents (see Menon's account of Philiston (*Anon. Lond.* XX), cf. Plato, *Timaeus* 86 a). For the opposing and widespread acceptance of a four humour theory see, e.g., *Nature of Man* 3–5 (pp. 170,8–176,9 Jouanna; 6.36,17–42,8 L.); cf. *Sacred Disease* 16 (6.390,10–392,3, 394,9–396,9 L.).

as reductive by the author of *VM* in that any phenomenon could be reduced to, and so exhaustively explained by, the fundamental physical elements of earth, air, fire and water (or these elements expressed through their qualities of the hot or cold or wet or dry).² A reductive explanatory scheme is attractive in that it appears to offer a complete understanding of all phenomena: when such analysis has been completed at the level of elements and their combination, the structure of all nature is taken to be exposed. Such analysis and understanding would encompass health and disease as much as any other area of *phusis*. It thus is a necessary condition for a full understanding of all subject matters and all phenomena.

In the particular case of medicine, a reductive explanatory scheme offers the possibility of total control over the maintenance of health and the eradication of disease, on the assumption that all matters can be controlled in practice.³ Even if a reductive explanatory scheme were obtained, however, it is a further matter to know how actually to *achieve* that control. *VM* makes this abundantly clear when it asks: what should be prescribed for someone suffering as a result of a poor diet: hot or cold or dry or wet?⁴ The response of the prac-

² That the explanations of Empedocles himself were not reductive, or eliminativist (for the latter claim see Sauve Meyer (1992) 791–825), is shown by Empedocles as preserved in the Strasbourg Papyrus, *ensembles* a (esp. a(ii) 17) and d, with DK B 17, which emphasise not only the importance of the powers of Love and Strife for the different combinations of the elements in the creation and destruction of the cosmos, but also the central, if obscure, role of the *daimones* in that process (see also Martin and Primavesi (1998) 61–64, 83–86, 90–95, 283–284).

³ In itself, a reductive explanatory scheme does not offer the possibility that all diseases are curable in theory, as it could expose the incurable nature of a disease. Although not reductionist, the possibility of such total control is the position adopted by *On the Art* 11 (περὶ τέχνης, *de Arte*), in which all diseases are seen as in theory curable, and the ability to achieve that level of cure is limited only by the evidence available to the practitioner, and the point in the development of the disease at which he becomes acquainted with the case (*De arte* 11.1, p. 237,7–9 Jouanna; 6.18,17–20,1 L.).

⁴ *VM* 13.2 (p. 133,19–134,1 Jouanna; 1.598,13–14 L.): τί δὲ τοιγαροῦν βοήθημα παρασκευάσασθαι ὃδ' ἔχοντι θερμὸν, ἢ ψυχρὸν, ἢ ξηρὸν, ἢ ὑγρὸν; cf. *VM* 15.1 (p. 137,15–17 Jouanna; 1.604,14–16 L.): οὐ γάρ ἐστιν αὐτέοισιν, ὥς ἐγὼ οἶμαι, ἐξευρημένον αὐτό τι ἐφ' ἑωυτοῦ θερμὸν, ἢ ψυχρὸν, ἢ ξηρὸν, ἢ ὑγρὸν, μηδενὶ ἄλλω εἶδει κοινωνέον. “No-one has discovered absolute hot, cold, wet or dry, rather all is compounded, and so such absolutes are of no use in medical treatment.” These absolutes are clearly the postulated ontological absolutes of the opponents of *VM*, and are not “used . . . in their ordinary sense (it *feels* hot)” as Hankinson (1998, 67; 1990, 64) suggests as a possible interpretation of *VM* 15.1. All texts reproduced are those of Littré, unless otherwise stated. All translations are my own.

tioner is that the explanation of the reductionist philosopher is of no use in treatment or diagnosis. Further, such explanations rest on mere postulates. That nature is composed of such elements is no more than a proposed answer, and any such proposed or postulated answer should be rejected:

ὁκόσοι ἐπεχείρησαν περὶ ἱητρικῆς λέγειν ἢ γράφειν, ὑπόθεσιν σφίσιν αὐτέοισιν ὑποθέμενοι τῷ λόγῳ, θερμὸν, ἢ ψυχρὸν, ἢ ὑγρὸν, ἢ ξηρὸν, ἢ ἄλλ' ὅ τι ἂν ἐθέλωσιν, ἐς βραχὺ ἄγοντες τὴν ἀρχὴν τῆς αἰτίας τοῖσιν ἀνθρώποισι τῶν νόσων τε καὶ τοῦ θανάτου, καὶ πᾶσι τὴν αὐτέην, ἐν ἣ δύο προθέμενοι, ἐν πολλοῖσι μὲν καὶ οἷσι λέγουσι καταφανέες εἰσὶν ἀμαρτάνοντες· μάλιστα δὲ ἄξιον μέμψασθαι, ὅτι ἀμφὶ τέχνης εὐούσης, ἥ χρέονταί τε πάντες ἐπὶ τοῖσι μεγίστοισι καὶ τιμῶσι μάλιστα τοὺς ἀγαθοὺς χειροτέχνας καὶ δημιουργοὺς. εἰσὶ δὲ δημιουργοί, οἱ μὲν φλαῦροι, οἱ δὲ πολλὸν διαφέροντες· ὅπερ, εἰ μὴ ἦν ἱητρικὴ ὅλως, μηδ' ἐν αὐτῇ ἔσκεπτο, μηδ' εὗροιτο μηδὲν, οὐκ ἂν ἦν, ἀλλὰ πάντες ἂν ὁμοίως αὐτέης ἄπειροί τε καὶ ἀνεπιστήμονες ἦσαν, καὶ τύχη ἂν πάντα τὰ τῶν καμνόντων διωκέετο. νῦν δ' οὐχ οὕτως ἔχει, ἀλλ' ὥσπερ καὶ τῶν ἄλλων τεχνῶν πασέων οἱ δημιουργοὶ πολλὸν ἀλλήλων διαφέρουσι κατὰ χεῖρα καὶ κατὰ γνώμην, οὕτω δὴ καὶ ἐπὶ ἱητρικῆς, διὸ οὐκ ἡξίου ἐγωγε κενὴς αὐτέην ὑποθέσιος δέεσθαι, ὥσπερ τὰ ἀφανέα τε καὶ ἀπορεόμενα· περὶ ὧν ἀνάγκη, ἣν τις ἐπιχειροίη λέγειν, ὑποθέσει χρέεσθαι· οἷον περὶ τῶν μετεώρων ἢ τῶν ὑπὸ γῆν εἰ λέγοι τις καὶ γινώσκοι ὡς ἔχει, οὐτ' ἂν αὐτέῳ τῷ λέγοντι οὔτε τοῖσιν ἀκούουσι δῆλα ἂν εἴη, εἴ τε ἀληθὲς ἐστὶν εἴτε μὴ· οὐ γὰρ ἔστι πρὸς ὅ τι χρὴ ἐπανεγέγκαντα εἰδέναι τὸ σαφές.

IM 1.1–3 (pp. 118,1–119,11 Jouanna; 1.570,1–572,8 L.)

All who attempt to speak or write about medical matters posit their own hypothetical postulate for their argument, hot or cold or wet or dry, or whatever else they wish to adopt, reducing the first principle of the cause of diseases and death to mankind, and this is the same in all cases, as they propose one or two postulates, and in many things they say⁵ they are clearly mistaken; but they are most open to blame concerning a craft that exists, which all use in connection with the most important circumstances, and they especially honour good craftsmen and practitioners. Some practitioners are poor, others outstanding; which would not be the case at all, if there were, in general, no medical science,⁶ nor if there had been no inquiry into it, nor if nothing

⁵ καὶ A M, Jouanna, Jones, L.: καινοῖσι Kühlewein after Schöne “in their new theories” see Jouanna note *ad loc.* for a discussion of these and further possible (minor) emendations.

⁶ It is not clear whether εἰ μὴ ἦν ἱητρικὴ ὅλως at *IM* 1 (p. 118,11–12 Jouanna; 1.570,10 L.) refers to (the existence of) a medical science at all or to a universal science of medicine: I have tried to keep the translation as neutral as possible between these alternatives. The resolution of this issue is tied to a textual matter:

had been discovered, but all would be equally inexperienced and without knowledge, and all treatment of the sick would be by chance. But now this is not the case, but just like all the other crafts, so in the case of medicine, practitioners differ a great deal from one another in dexterity and understanding. The result is that I myself do not think there is any need of any empty⁷ postulate, as is the case with not visible and mysterious issues, about which it is necessary, if anyone tries to give an account, that they make use of a postulate; as for instance, concerning matters in the sky or below the earth, if anyone were to give an account and understand how these things are, it would not be apparent either to the speaker himself or his listeners whether what he said was true or false; for there is nothing by reference to which it is necessary that one would know clearly.

VM is questioning the basis upon which medical understanding should be founded: should that basis be a hypothetical postulate or postulates, such as the hot, the cold, the wet and the dry, and if not, what? But before those questions can be examined, it is necessary to consider the use of the term *hypothesis*, ὑπόθεσις in this work.⁸ It

VM 2.2 (p. 120,1–2 Jouanna; 1.572,15–16 L.): ἐγὼ πειρήσομαι ἐπιδείξαι, λέγων καὶ δεικνὺς τὴν τέχνην ὅ τι ἐστίν. ὅτι ἐστίν: A, Jouanna; “that the science exists”: ὅ τι ἐστίν: M, Jones, L.; “what it is”. To follow MS. A is to set the agenda of *VM* as primarily concerned with establishing the *existence* of medicine as a *technê*. To follow MS. M sets the agenda of *VM* as primarily concerned with what *sort* or *type* of *technê* medicine is. The reading of MS. A pursues a justification of medicine as worthy of craft-status, as does *De arte*, although *VM* employs different arguments to that treatise, for instance that lack of precision is permissible within the operation of a *technê*. The reading of MS. M is preferable as it takes the existence of the medical *technê* to be established by *VM* 1.1–2 (pp. 118,7–119,4 Jouanna; 1.570,6–572,2 L.), and then continues to explain *what type* of *technê* medicine is, specifically examining what level of precision the medical *technê* properly displays (*VM* 9.3, pp. 128, 9–17 Jouanna; 1.588,13–590,4 L.; *VM* 12; pp. 132,18 ff.; 1.596,8 ff. L.). The reading of MS. M is also supported by the parallel with *VM* 20.1 which addresses the question whether anyone can know medicine who does not know ὅ τί ἐστίν ἄνθρωπος (pp. 146,2 Jouanna; 1.620,11 L.).

⁷ κενῆς M, Jones, L.; καινῆς A, Jouanna; “a new postulate”. The reading of MS. M here, and of MSS. A and M as set out in n. 7 above, is to be preferred as it is not the *novelty* of any postulate employed in such theories with which the author disagrees, but that the theory is grounded by postulate(s). See Jouanna note *ad loc.*

⁸ ὑπόθεσις is found only once outside *VM* in the Hippocratic Corpus, in the last chapter of the probably contemporary *On Breaths* (περὶ φουσῶν, *De flatibus*, *Flat.*), 15.2 (p. 125,1 Jouanna; 6.114,18 L.), and, coming at the end of the treatise, it points to the main theory of the work (that air is the fundamental constituent of the world, and so also the primary cause of health and disease). The use of this term to refer to the positive theory of the author clearly contrasts with the use of the term in *VM*, where it is reserved for the postulated first principles of his opponents (as noted by Lloyd, 1963, 110 n. 2). For textual issues (ὑπόθεσις M L.: ὑπόσχεσις A), see Jouanna (1988) 150–1. On the date of *On Breaths*, see Jouanna (1999) 378. ὑποθέσθαι, however, is found in *Vict.* 1.2 (6.470,22 L.), *Carn.* 1.3 (p. 188,3 Joly; 8.584,3 L.),

is clear that the author of *VM* is concerned with postulated assumptions of some sort, as is clear in his reference to the hot, cold, wet and dry derived from philosophy, but his are *physical*, not mathematical, postulates.⁹ The adoption, however, of the term *hupothesis* may have been influenced by the mathematical use of *hupothesis*.¹⁰ What we know from the text of *VM* is that the term is used of the theory of his opponents, the *hupothesis* is introduced by them in order to make an inference to a conclusion and the *hupothesis* itself is not apparent or self-evident (οὐτ' ἄν . . . δῆλα ἄν εἴη). This echoes Karasmanis' claim about *hupothesis* in Plato that, "Platonic *Definitions* defined a *hupothesis* as an 'undemonstrated principle' (*archê anapodeiktos*). But in Plato's dialogues, the usual meaning of the word *hupothesis* is 'starting point for the discussion' . . . The hypothesis is always posited provisionally," and the suggestion is that Plato's use of *hupothesis* is one derived at least partially from Hippocratic texts.¹¹ But there is a difference in attitude towards hypotheses between Plato and *VM*. In Plato, hypotheses are set down as propositions to be proved or refuted.¹² Hypotheses in *VM* indicate that the assumptions made by the author's opponents *cannot* be proven or refuted in this way, for they are accepted by the author only in cases, such as matters below the earth or in the sky,¹³ where it would "not be apparent either to the speaker himself or his listeners whether what he said was true or false". It is necessary, therefore, not to look to Plato or to other philosophical or mathematical writers, but within the text itself for further information on these hypothesised postulates.¹⁴

In attempting to fix the author's objections as precisely as possible, a textual matter is crucial: instead of the discussing 'empty'

and *Praec.* 4 (ὑποθήσεις R: ὑποθήσῃ p. 31,19 Heiberg: ὑποθέσθαι; 9.256,1 L.). See further Kühn & Fleisher (1989) 829 under ὑποτίθημι.

⁹ As pointed out by Lloyd (1979) 135 and n. 50, and Hankinson (1990) 57.

¹⁰ For the mathematical uses of ὑπόθεσις, see Lloyd (1963) and (1979) 111–115, and Karasmanis (1987) chs. 2, 7–8.

¹¹ Karasmanis (1987) 9 and n. 18.

¹² For instance, Plato, *Meno* 86 e–87 c; *Phaedo* 92 d, 101 d 2; *Republic* 388 e, 437 a; *Sophist* 237 a; *Timaeus* 61 d.

¹³ Matters "in the sky" seem to refer to the astronomical, rather than the atmospheric (such as lightning). See Plato, *Apol.* 23 d 6 (τὰ μετέωρα καὶ τὰ ὑπὸ γῆς).

¹⁴ Lloyd (1963) suggests that, as far as evidence allows, it seems that the doctrines attacked in *VM* are those of Philolaos of Croton. This suggestion has been taken up by Huffman (1993) 78–92, who stresses the theoretical precision sought in his theory of ἀρχαί (cf. *VM* 2.1, p. 119,13 Jouanna; 1.572,10 L.; *VM* 7.3, p. 126,16 Jouanna; 1.586,1–2 L.). Whether the author is attacking a single author, or many, his target is postulate-grounded theories of medicine.

postulates, *VM* could be read as rejecting the adoption of “new” postulates.¹⁵ However, it is unclear how a ‘new’ postulate, or a series of them, would fall foul of the author’s objections. For a ‘new’ postulate might actually give us the answers in medicine, as much as in matters below the earth and in the sky, and be shown to be true or false.

What is of interest is why the postulated theories of those such as Empedocles are considered ‘empty’. ‘Empty’ can be understood in three ways:

- (1) On the strictest reading, ‘empty’ could be taken as ‘without content’: as such, postulated theories would mean nothing as they say nothing, in a manner comparable to the rejection of all theory and theoretical reasoning by later strict Empiricists.¹⁶
- (2) ‘Empty’ could be taken as ‘unsubstantiated,’ that is, the postulated theory would have content, but there would be no evidential support for the theory, for it would not be supported by the consideration of either past cases or ongoing or future success. This would be illustrated by the case of the patient with a poor diet, for whom reference to the hot, the cold, the wet and the dry is of no use. In such a case, reference to the hot, the cold, the wet and the dry is ‘empty’ since reference to postulates does not explain the progress of past or present cases. Nor does a postulate-grounded theory offer the possibility of prediction, for no perceptual or observational evidence links cases to theory at any level. It is *observational evidence* which needs to be referred to (πρὸς ὃ τι . . . ἐπανενέγκαντα)¹⁷ in order that one is compelled of necessity (χρῆ) to know clearly (εἰδέναι τὸ σαφές).¹⁸

¹⁵ See notes 5 and 7 above.

¹⁶ As for instance in Galen, *Subfiguratio empirica* 4, 48,8 ff., 65.5 ff. (ed. Deichgräber (1930). See also Frede (1990).

¹⁷ Cf. πρὸς ὃ ἀναφέρων (*VM* 9.3, p. 128,11 Jouanna; 1.588,14 L.) quoted and discussed below, where the author claims that the only *metron*, or measure, to which one can refer is the inexact one of perception.

¹⁸ Cf. Aristotle’s use of *kenos* in relation to theories not connected to appropriate *archai* which are too (*lian*) general and unconnected to the facts, Arist. *GA* 748 a 7–11: οὗτος μὲν οὖν ὁ λόγος καθόλου λίαν καὶ κενός· οἱ γὰρ μὴ ἐκ τῶν οἰκείων ἀρχῶν λόγοι κενοί, ἀλλὰ δοκοῦσιν εἶναι τῶν πραγμάτων οὐκ ὄντες. οἱ γὰρ ἐκ τῶν ἀρχῶν τῶν γεωμετρικῶν γεωμετρικοί, ὁμοίως δὲ καὶ ἐπὶ τῶν ἄλλων· τὸ δὲ κενὸν δοκεῖ μὲν εἶναι τι, ἔστι δ’ οὐθέν. cf. *Met.* 992 a 28: διὰ κενῆς λέγομεν. See further Bonitz (1955) *ad loc.*

- (3) 'Empty' could be taken as 'without possible proof'. This reading could be supported by the manner in which the author discusses the theories of matters below the earth and in the sky: the postulated theory has content, but due to the domain or type of subject matter (the not visible, the mysterious), no possible proof of truth or falsity can be provided. It is a *proof* which is required in order that one is compelled of necessity to know clearly.

Clearly position (3) rests on a more demanding view of what is required than that of (2): where (3) speaks of proof, (2) only requires some evidential link between perceived medical cases and an underlying theory.

Position (1), however, where 'empty' is taken as 'without content', would be a self-contradictory position for the author to have taken: what he criticises as empty in the case of medicine would similarly be without content in the case of matters under the earth or in the sky, in which case also they could not claim to give any account at all. *VM* I states that the use of postulates, which gives an 'empty' account in the case of medicine, is 'necessary' in the case of matters under the earth or in the sky. Thus, position (1), where 'empty' would be taken as 'without content' is to be rejected. What remains to be seen is whether *VM* is concerned with the demand for an evidential link (that which 'empty' accounts do not provide in position (2) or for proof of truth or falsity (that which 'empty' accounts do not provide in position (3)).

To clarify this, *VM*'s discussion of matters under the earth and in the sky needs to be considered again. In that domain, since postulate-grounded accounts are said to be "necessary" if any account is to be given of such matters, the *only* type of account available is one based on such postulates. The difficulty with any such account is that its subject matter is "not visible" and "mysterious", that is, it is remote, and so in general inaccessible. As a result, the account *can not* be substantiated, as there is no means by which such substantiation *could* be reached. The account *is* 'empty', but nevertheless some sort of account is given in such cases. It seems that the only account which can be given or expected in such 'not visible' and 'mysterious' cases is a *consistent* one. A consistent account would give an explanation of sorts for the phenomena witnessed, but would do so without any evidential link to the phenomena discussed.

VM claims that medicine is a completely different type of case to astronomy, since the phenomena in medical cases are accessible. The author of *VM* states that those who consider postulate-based accounts, as are necessary in astronomy, sufficient or even useful in medicine “are clearly mistaken” (καταφανέες εἰσὶν ἀμαρτάνοντες). Medicine is said by *VM* 2.1 to have found a “first principle”, an *archê* (ἀρχή . . . εὐρημένη, *VM* 2.1, p. 119,12–13 Jouanna; 1.572,9 L.), other than the postulates adopted in astronomy and by Presocratic philosophers such as Empedocles.¹⁹ The *archê* is tied to the method (καὶ ἀρχὴ καὶ ὁδὸς εὐρημένη, *VM* 2.1, p. 119,12–13 Jouanna; 1.572,9 L.), which *VM* states must be pursued in order to inquire or give an account.²⁰ The *archê* and the method must focus on the point of view of the lay person,²¹ in order that an account is given of the craft of medicine:

μάλιστα δέ μοι δοκεί περὶ ταύτης δεῖν λέγοντα τῆς τέχνης γνωστὰ λέγειν τοῖσι δημότησιν.

VM 2.3 (p. 120,3–5 Jouanna; 1.572,18–19 L.)

And especially, it seems to me that the person giving an account of this craft must give an account of things which are familiar to ordinary people.

The *archê* will be shown to be the perceptible phenomena, accessible to lay people as much as practitioners, since the choice and the success of treatment given in the exercise of the craft of medicine must be able to be evaluated by all. The method by which medical knowledge is acquired will be shown to be through reflection on the actual treatment of cases, a pragmatic progress of regular success with certain types of treatment.

¹⁹ *VM* may have been interested in Empedocles in particular not only because he employed the postulated hot, cold, wet and dry in his medical accounts, but also because he employed these same postulates in his cosmological and astronomical accounts.

²⁰ οὐ γὰρ περὶ ἄλλου τινὸς οὔτε ζητεῖν προσήκει οὔτε λέγειν, *VM* 2.3 (p. 120,5–6 Jouanna; 1.572,19–20 L.)

²¹ *VM* 2.3 (p. 120,3–5 Jouanna; 1.572,18–19 L.): μάλιστα δέ μοι δοκεί περὶ ταύτης δεῖν λέγοντα τῆς τέχνης γνωστὰ λέγειν τοῖσι δημότησιν. cf. *Vict.* 3.68 (6.594,3 ff. L.) addresses itself to ‘the many’; *Morb.* 1.1 (6.140,1 ff.) seems to include lay people as much as practitioners in questioning proposed treatment; περὶ τέχνης, *De arte* 4.1 (p. 227,7 Jouanna; 6.6,7 L.) states that the starting point should be accepted by “all”, which presumably also includes lay people as well as theorists; *Nat. Hom.* 1–2 discusses *epideixis* competitions concerning the elemental constitution of the body: such a debate called on lay people as much as theorists through the universal applicability of reason.

It could be claimed that the adoption of a perceptually-graspable starting-point opens up *VM* to the objection that medicine is left without any theoretical underpinning if it rejects the philosophers' postulates. The objection would be that, without a theoretical underpinning such as is given by a postulate-grounded theory, medical accounts can demonstrate no causal basis for regularity of symptoms over cases of disease, or success over a number of cases with a certain medicine, and so on. *VM*'s claim, however, is that it is not *hypothesised* postulates that one needs for that underpinning, but rather one needs to get to know the *operative* causal bases of health and disease, and these bases are to be accessed from the starting point of perceptible phenomena. Since the *archê* of *VM* is perceptual phenomena, as opposed to postulates, *VM*'s *method* is *inductive*, as opposed to the *deductive* method pursued by those who adopt hypothesised, postulated *archai* derived from Presocratic philosophy, such that the *archê*, the 'first principle', is the 'starting point' of discovery in medicine.²²

As a result of his phenomenon-grounded inductive method, the author of *VM* concentrates in particular on human interaction with those foods which are regularly perceived to be fitting for the human constitution, and those which are regularly too strong for the body to cope with.²³ This information, and an operative understanding of it, is gained through the continued development of human regimen (*VM* 7.2, p. 126,8–14 Jouanna; 1.584,11–16 L.), which is the result of the many fine discoveries which have come about over time and will continue to do so in the future (τὰ εὐρημένα πολλά τε καὶ καλῶς ἔχοντα εὐρῆται ἐν πολλῷ χρόνῳ, καὶ τὰ λοιπὰ εὐρεθήσεται. *VM* 2.1, p. 119,13–15 Jouanna; 1.572, 10–11 L.). Consideration of this focus on foods and regimen will make clear the crucial points: what it is to know clearly (εἰδέναι τὸ σαφές) and how this relates to the method and the *archê* of the medical craft.

In *VM* there is a recognition of the needs of the practitioner to look to an assessment of a right amount in his prescriptions (of certain foods, and in certain preparations), together with an acceptance

²² *Archê* can be translated "first principle" as well as "starting point"; see Lloyd (1987) 129, n. 93 and LSJ *ad loc.*

²³ *VM* 14.3 (p. 136,3–5 Jouanna; 1.602,4–6 L.): ἀλλὰ τὸ ἰσχυρὸν ἐκάστου καὶ τὸ κρέσσον τῆς φύσιος τῆς ἀνθρωπίνης· οὐ μὴ ἡδύνατο κρατέειν, τοῦτο βλάπτειν ἡγήσαντο, καὶ τοῦτο ἐζήτησαν ἀφελέειν. cf. *VM* 10.1–9 where it is discussed that it is necessary to match the prescribed diet to the constitution of the individual. cf. 20.1 (pp. 146,17–147,1 Jouanna; 1.622,7–10 L.).

of the idea that accuracy in medicine is rarely obtainable in practice. The medical practitioner is classed as a craftsman, even though he does not deal with exact quantities, assessable on an accurate scale of measurement. The author of *VM* is aware that his dismissal of exactitude, whilst maintaining the craft-status of medicine has to be justified, since general lack of accuracy would tend to speak against the operation of a *craft*:

μέτρον δὲ, οὐδὲ σταθμὸν, οὐδὲ ἀριθμὸν οὐδένα ἄλλον, πρὸς ὃ ἀναφέρων εἶσθι τὸ ἀκριβές, οὐκ ἂν εὐροίης ἄλλ' ἢ τοῦ σώματος τὴν αἴσθησιν· διὸ ἔργον οὕτω καταμαθεῖν ἀκριβέως, ὥστε σμικρὰ ἀμαρτάνειν ἔνθα ἢ ἔνθα· κἂν ἐγὼ τοῦτον τὸν ἡτρὸν ἰσχυρῶς ἐπαινέοιμι τὸν σμικρὰ ἀμαρτάνοντα. τὸ δ' ἀκριβές ὀλιγάκις ἐστὶ κατιδεῖν· ἐπεὶ οἱ πολλοὶ γε τῶν ἡτρῶν ταῦτά μοι δοκέουσι τοῖσι κακοῖσι κυβερνήτησι πάσχειν.

VM 9.3–4 (p. 128,11–18 Jouanna; 1.588,14–590,5 L.)

But no there is no measure by reference to which can one know exactly, neither of number nor weight nor of any other sort, other than the perception of the body; and so it is laborious to make understanding exact to that degree that only small mistakes are made here or there. I would strongly praise that doctor who made only small mistakes. Accuracy is encountered on very few occasions: since the majority of doctors seem to me to be in the same state in these respects as poor helmsmen.

Small mistakes are often made by helmsmen, and these mistakes are of no consequence in calm weather. It is when large mistakes are made in serious circumstances, such as in a crisis at sea, that the incompetence of the helmsman becomes evident. While these grave mistakes call into question the ability, and craft-status, of an individual, there is no hint that small mistakes threaten the craft-status of helmsmanship. Each case to which a doctor is called, however, is a crisis.²⁴ So how accurate must the response of the doctor be to

²⁴ Cf. *On Diseases* 1, which sets out a theory of disease based on the postulates of bile and phlegm, but claims that there is no demonstrated beginning or principle (ἀρχὴ ἀποδεδειγμένη) for medicine as a whole, as illustrated by the difference in the *καίροι* (critical turning-points) between diseases, between one body and another or between ages (*Morb.* 1.9, 6.156,14 L., cf. *Morb.* 1.5, 6.146,15 L.). As a result, it is not possible to have exact knowledge (τὸ ἀκριβές εἰδέναι, *Morb.* 1.16, 6.168,23; 170,2–4 L.; cf. *Vict.* 3.67, 6.592,1–594,2. L.). Cf. *De arte* 7.2 (pp. 231,8–11 Jouanna; 6.10,21–23 L.) where mistakes made by practitioners are evidence for the *existence* of the art of medicine, rather than the opposite proposed by medicine's detractors: for when medicines are properly applied the working of the craft is displayed, mistakes merely show the incorrect application of remedies. See also Lloyd (1987) 253–270 for further examples.

the crises with which he deals in order to retain his craft-status?

At *VM* I.3 (p. 119,11 Jouanna; 1.572,8 L.) we are told that in the case of postulate-grounded accounts (for instance, the astronomical), there is nothing by reference to which one would necessarily know clearly (οὐ γὰρ ἔστι πρὸς ὃ τι χρηὶ ἐπανενέγκαντα εἰδέναι τὸ σαφές). In the passage quoted above, *VM* 9.3–4, we are informed about the nature of this point of reference (πρὸς ὃ ἀναφέρων). We are told in *VM* 9.3–4 that there is no *metron* “measure” in medicine by reference to which we could know accurately; nor is there such a point of reference in astronomy. I suggest, therefore, that to know accurately, both in medicine (εἰδέναι τὸ σαφές, *VM* 9.3–4) and in astronomy (εἴσῃ τὸ ἀκριβές, *VM* 1.3) would require a *metron* such that one would know an exact measure quantified in some way (number, weight, and so on). Strict accuracy would require the calculation of a precisely quantifiable measure. Such accuracy is not available in astronomy or medicine, for any supposed quantifiable precision would be without the evidential support of reference to the phenomena. Even if someone were to grasp astronomical theory in a way in which theory precisely and completely explained reality, *VM* asserts that they could not *know* it to be true.²⁵ Postulate-grounded

²⁵ In the case of astronomy, as well as matters “under the earth”, the phenomena are so remote that they are largely “not visible” and, as a result, “mysterious” (“mystery” here is clearly concerned with the inability to perceive certain phenomena, rather than any links to magic or mysticism). That only minimal phenomena are grasped by humans makes a phenomenon-grounded account of the sort that *VM* will be shown to propose for medicine “not possible”, in the sense of “unavailable”. There seems no reason in theory why a phenomenon-grounded account of these subject matters should not be able to be constructed, were the phenomena to become accessible. The practical inconceivability of such access, however, leads the author to speak of the necessity of a postulate-grounded account in such cases (περὶ ὧν ἀνάγκη, ἥν τις ἐπιχειροίη λέγειν, ὑποθέσει χρεεσθαι, *VM* 1.1).

Hankinson (1992, 58) claims that a similar distinction to that of *VM* is made by Xenophanes DK B34:

καὶ τὸ μὲν οὖν σαφές οὕτως ἀνὴρ ἴδεν οὐδέ τις ἔσται
εἰδὼς ἀμφὶ θεῶν τε καὶ ἄσσα λέγω περὶ πάντων·
εἰ γὰρ καὶ τὰ μάλιστα τύχοι τετελεσμένον εἰπών,
αὐτὸς ὅμως οὐκ οἶδε· δόκος δ' ἐπὶ πᾶσι τέτυκται.

where *clear* knowledge (τὸ μὲν οὖν σαφές) of the truth about the gods could *never* be known clearly by humans. This inability to attain knowledge also applies to the other subject matter referred to here (καὶ ἄσσα λέγω περὶ πάντων): the lack of sufficient context leaves it unresolvable whether the reference is to the subject matter of Xenophanes' poem as a whole or to knowledge of the cosmos. Even if humans came across the truth by chance, they would be unable to translate acquaintance with this truth into knowledge, the best that humans can achieve epistemologically is belief (δόκος). Xenophanes, however, in his discussion of knowledge of τὸ σαφές

theories are ‘empty’ because they are based on arbitrary assumptions. This is not due to the ‘generality’ of the theory, as claimed by Hankinson (1990, 58). It is rather, as Lloyd (1987, 280–1) points out, because a *precise* account could also readily be assumed to be an *accurate* one. He uses the example of the casting of horoscopes to illustrate that the “mathematical rigour of an entire enquiry . . . could be impeccable, but the inquiry remains with too little purchase, too little grip on the phenomena. The appeal to the mathematical often gave a spurious air of certainty, the precise being confused with the accurate”.²⁶ Instead, an *observation-based* assessment of balance and harmony is central to the understanding of the work of the doctor. The strength and amount of food required is grasped through the doctor’s perception of the body of the patient (τοῦ σώματος τὴν αἴσθησιν).²⁷ The accurate measure, *metron*, must be aimed at (δεῖ γὰρ μέτρου τινὸς στοχάσασθαι, *VM* 9.3, p. 128,10–11 Jouanna; 1.588,14 L.), but accuracy is rare in the operation of *this craft* (τὸ δ’ ἀκριβὲς ὀλιγάκις ἐστὶ κατιδεῖν), due to the inexactitude of a perceptual measure. Hence, accurate knowledge (εἴση τὸ ἀκριβὲς) is unobtainable if the demand is for precisely quantifiable accuracy (οὐδὲ σταθμὸν, οὐδὲ ἀριθμὸν).

But why is accurate knowledge unattainable by the craft of medicine? *VM* 20.1 addresses the issue of the scope of the medical craft in considering whether anyone can claim to know medicine without knowing what man is, ὅ τί ἐστὶν ἄνθρωπος (pp. 146,2 Jouanna; 1.620,11 L.) even though, at *VM* 20.2, the author states that the study of nature, *phusis*, is of no more relevance to the medical art than it is to the graphic:²⁸

λέγουσι δέ τινες καὶ ἡτροὶ καὶ σοφισταὶ ὥς οὐκ ἔνι δυνατόν ἡτρικὴν εἰδέναι ὅστις μὴ οἶδεν ὅ τί ἐστὶν ἄνθρωπος· ἀλλὰ τοῦτο δεῖ καταμαθεῖν

is concerned with the impossibility of the *verification* of (certain *kinds* or domains of) truths; *VM* is concerned with the level of *accuracy* demanded for knowledge of τὸ σαφές. Cf. Gorgias, DK B11a10, 19–21; εἰδὼς ἀκριβῶς ἡ δοξάζων: Gorgias DK B11a136.

²⁶ See also Lloyd (1987) 312–319 on the aims and assumptions of Greek astronomers.

²⁷ See Bratescu (1983) 137–144 for a summary of previous interpretations of τοῦ σώματος τὴν αἴσθησιν, noting especially those of Deichgräber (*Hermes* 68, 1933), Muri (*Hermes* 71, 1936) and Diller (*Hermes* 80, 1952) who claim that *aisthesis* refers to the “sensations” felt by the patient, not the perception of the doctor as argued here. See also Jouanna (1990) 173–5 *ad loc.*

²⁸ *VM* 20.2 (p.146,8–9 Jouanna, 1.620,13–14 L.): ἥσσον νομίζω τῇ ἡτρικῇ τέχνῃ προσήκειν ἢ τῇ γραφικῇ. It is unclear whether literature or writing skill is being referred to here.

τὸν μέλλοντα ὁρθῶς θεραπεύσειν τοὺς ἀνθρώπους. τείνει δὲ αὐτέοισιν ὁ λόγος ἐς φιλοσοφίην, καθάπερ Ἐμπεδοκλῆς ἢ ἄλλοι οἱ περὶ φύσιος γεγράφασιν ἐξ ἀρχῆς ὅ τί ἐστιν ἄνθρωπος, καὶ ὅπως ἐγένετο πρῶτον καὶ ὅπως ξυνεπάγη.

VM 20.1 (pp. 145,18–146,7 Jouanna; 1.620,7–12 L.)

Certain doctors and sophists²⁹ say that it is not possible for someone to know medicine who is ignorant of what a man is; but the one who is going to treat people correctly must learn this thoroughly. But this question of theirs tends to philosophy,³⁰ just as for Empedocles or others who have written about nature from a first principle [*or*: from the beginning] what man is and how he first came into being, and how he was constructed.³¹

²⁹ τινες ἱητροὶ καὶ σοφισταὶ A: τινες καὶ ἱητροὶ καὶ σοφισταὶ M; the reading of MS. M makes a more distinct separation between the doctors and sophists; MS. M is supported due to the parallel with 20.2, 146,7–8 Jouanna; 1.620,12–13 L.: τινὲ ἢ σοφιστῇ ἢ ἱητρῷ. Jouanna (1990) 20, is mistaken in taking this section as separate to the previous attack on opponents to the method of *VM*, thereby taking it that a discussion of what a human being is, is a completely unconnected topic to that of debates covering the acceptability or otherwise of philosophical postulates and methods of inquiry.

³⁰ This is one of the earliest uses of the term φιλοσοφίη in surviving Greek literature, and therefore should not point to a sharp distinction, if any at all, between philosophers and “sophists”. The distinction seems to be between those working with a *hypothesis*, such as “sophists”, Empedocles, and those who construct postulate-grounded theories, and those who are pursuing the method advocated by *VM*.

³¹ περὶ φύσιος: it is clear that Empedocles was concerned with more than just the status of human beings in the cosmos, and this suggests that περὶ φύσιος in *VM* should be read as referring to nature as a whole, generally understood (that is, part of a general or universal account of nature). This translation is wider in scope than that of Jouanna, who takes it as though the writer of *VM* is considering Empedocles as someone whose central concern was the understanding of *human beings*, and all discussion of the nature as a whole is subordinate to understanding the place of human beings within it. Even if that were the intended focus of Empedocles (for instance through his emphasis on the *daimones*), and that focus is echoed in *VM*, a human-focused reading can not be maintained (*contra* Jouanna (1990) 208, who claims *all* occurrences of περὶ φύσιος in this chapter are concerned with *human* nature): for the nature of human beings was not the central concern of other Presocratic philosophers (ἢ ἄλλοι οἱ περὶ φύσιος γεγράφασιν) who wrote about medicine, such as Democritus and Pythagoras (Celsus, *Proem.* 7). See Jouanna (1990) 207, who conjectures τείνουσι from τείνει in the main clause, to grammatically complete the καθάπερ clause (rather than an understood repetition of γεγράφασιν). Jouanna’s reading would have *VM* claim that Empedocles and the other Presocratics merely *tend* to philosophy, losing the distinction between those who erroneously write like the philosophers by employing philosophical postulates when concerned with medicine, as opposed to those who take the phenomena as their first principle in medical explanation.

On possible copyist errors, in which 20.1 146, 2–5 Jouanna; 1.620,8–11 L.: ἀλλὰ τοῦτο . . . ἐστὶν ἄνθρωπος is a marginal note which entered the text and as such should be removed, see Jouanna in the Budé, 93–94. This would remove all mention

It is made clear that although medicine can not be learned by means of the study of nature, the study of nature can only be known from the basis of the previous study of medicine and by means of its methods. The craft of medicine is the means to understanding what the nature of man is.³² In this way, the medical methods adopted by *VM* do appropriately “tend to philosophy”, that is, medical understanding and the method of inquiry *VM* advocates are the only means by which one can get to *know* about *nature*, but to go beyond the scope of the medical craft is the work of philosophy. By exceeding the scope of the medical craft one could, perhaps, come to understand the whole of nature, that is, the cosmos. For it is by means of observational *archai*, together with the method of reflection on cumulative success, that one can come to know the nature of man. From that point, extending medical understanding to the understanding of the science of nature, one could, perhaps, get to know the nature of the cosmos. The method employed would be the medical one which begins with the observable and reflects on successful interaction with the observable to achieve an understanding, but one

of Empedocles and other Presocratics, and with it the force of *VM*’s argument. ἐξ ἀρχῆς· it is not clear whether ἐξ ἀρχῆς should be taken with ἐστὶν or γεγράφασιν. Placement would make it be read most naturally with γεγράφασιν, with ὃ τί ἐστὶν ἄνθρωπος as complement. Yet this would give a temporal sense to ἐξ ἀρχῆς, either in the sense of “from the beginning of their works”, or “from the origin of man”. The latter would repeat the sense of the indirect questions with which the author immediately continues, and the former would contradict what is known about the beginning of Empedocles’ poem, that it began with a discussion of general causal principles in the cosmos, rather than a discussion of human anatomy, physiology, etc. (see Martin and Primavesi (1998) 103–11). Further, either of the above translations would not capture the crux of the disagreement discussed, which is between those who begin their speculation from a philosophically-postulated first principle and those who begin from the phenomena. The greatest support, therefore, is for the reading of ἐξ ἀρχῆς with ἐστὶν and the translation “first principle”, in the sense of “starting point in argument”.

³² *VM* 20.2 (p. 146,9–15 Jouanna; 1.620,14–622,5 L.): νομίζω δὲ περὶ φύσιος γινῶναι τι σαφὲς οὐδαμῶθεν ἄλλοθεν εἶναι ἢ ἐξ ἡτρικῆς. τοῦτο δὲ, οἷόν τε καταμαθεῖν, ὅταν αὐτέην τις τὴν ἡτρικὴν ὀρθῶς πᾶσαν περιλάβῃ· μέχρι δὲ τούτου πολλοῦ μοι δοκεῖ δεῖν· λέγω δὲ τὴν ἱστορίην ταύτην εἰδέναι ἄνθρωπος τί ἐστὶ, καὶ δι’ οἷας αἰτίας γίνεται, καὶ τᾶλλα ἀκριβέως. *VM* allows both γινῶσις and ἐπιστήμη to be qualified by both ἀκριβῆς and σαφής. The only way in which one can understand anything clearly about nature is from the basis of medicine, *VM* 20.2 (p. 146,9–11 Jouanna; 1.620,14 L.): νομίζω δὲ περὶ φύσιος γινῶναι τι σαφὲς οὐδαμῶθεν ἄλλοθεν εἶναι ἢ ἐξ ἡτρικῆς. It is in this way that one will gain accurate knowledge (εἰδέναι τὸ σαφές, *VM* 1.3 p. 119,11 Jouanna; 1.572,8 L.; εἴση τὸ ἀκριβές 9.3, 128,12 Jouanna; 1.588,15; εἰδέναι . . . ἀκριβέως 20.2, 146,14–15; 1.622,4–5 L.). See further Kühn & Fleisher (1989) *ad loc.*

which extends beyond its origins in the medical craft, and so is not the work of the *medical* craft.³³

The author of *VM* has been shown to have three major and distinct areas of concern (though these are interwoven in the text). In each of these areas he makes apparent a criticism of postulate-grounded medicine, and replies to it. His three major areas of concern are:

- (1) the type of starting points for explanation upon which an account of medicine must rely have to be accessible to the subject in some way (*Philosophy*: hypothesised postulates; *VM*: the perceptual evidence of phenomena),
- (2) the method of inference to be employed in inquiry/working out what to do in a particular case (*Philosophy*: deduction; *VM*: induction), and
- (3) the level of accuracy demanded of an explanatory account in medicine (*Philosophy*: the precisely quantifiable; *VM*: that which can be perceived in practice to remove symptoms/restore the patient to health, not precisely-quantifiable).³⁴

It is clear, therefore, that the author of *VM* is seeking to distance himself not only from the postulate-driven theories which derived from Presocratic philosophy, but also the methods of such theorists in general: as a result of his concentration on (1), points (2) and (3) are raised in the text. Since they could not be substantiated, such postulate-based theories opened up an explanatory gap between practice and theory, where practice and theory do not inform one another. But in trying to bridge this practice-theory gap, it is also clear that the author of *VM* is no strict empiricist who rejects all theory and theoretical reasoning.³⁵ For he is committed to the use of reasoning,

³³ Perhaps *philosophy* would be able to grasp the accurate *metron*, but it would do so as the work of the philosophy, not as work in any way relevant to the medical craft. cf. *Nat. Hom.* 1, CMG I.I.3, p. 164,14. The opponents of *Nat. Hom.* are those who extend their arguments about the nature of man beyond that which is relevant to the craft of medicine: they claim that man is composed of earth, air, fire or water.

³⁴ *VM* does not separate, either in his account or in his criticism of his opponents', accuracy of quantification from testability through success, even though these aspects are conceptually distinguishable.

³⁵ Hankinson (1998, 65) claims that *VM* is concerned with "empirically-based medical practice", and in the next paragraph that "medicine is a respectable empirical science". These are two distinct claims and Hankinson seems unclear about

logismos, to uncover causes, as explicitly stated in *VM* 1 and 21,³⁶ and this use of reasoning is contrasted with chance (*tuchê*), for instance at *VM* 12 (pp. 132,18–133,6 Jouanna; 1.596,8–598.2 L.).³⁷ Most importantly his is not the deductive reasoning which descends from the postulates of the philosophers, but the inductive reasoning which has the phenomena as its first principle and starting point. The author of the *VM* is making inferences to causes for health and disease just as much as the Empedoclean school of medicine and other Presocratics, and just like them he reasons to a disruption of the normal balance and functioning of the body. The inferential results the author reaches, however, are not theory-driven ones concerning a precisely quantifiable disruption of the balance of the postulated hot, cold, wet and dry, which it is the job of medical theory to calculate. His concern is with the perceptible balancing of the strengths of foods, as excessive strength in foods is seen to cause imbalances in the body, a *theory* constructed by *inductive inference* from the *starting point* of *observation*. His method of reasoning proceeds from the earliest discoveries that some foodstuffs are too strong, *ischuron*, and need to be blended or weakened to be made palatable. It is by consideration of each case from that *general* basis that all humans, with their many different individual constitutions, can gain mastery over their regimen and so achieve health (*VM* 3.4, pp. 122,13–123,3 Jouanna; 1.578,2–7 L.).³⁸ It seems that this method explains the use

which claim(s) he is making for *VM* (*idem*, 68), “The causal assumptions in play here [he has just quoted 15. 18–25] are not . . . obviously compatible with the strictest empiricism. But at least his account is empirically motivated”. It is clear that *VM* is advocating an empirical basis for medical practice, but the treatise is in no way claiming that medicine is “compatible with the strictest empiricism”. For if medicine were a strict empirical science, then it would have to conform to strict empiricist claim that no more than visible signs are admissible as the bases for treatment. Strict empiricism would constitute the rejected position 1 discussed above.

³⁶ *VM* 1 (pp. 118,14 Jouanna; 1.118,14 L.); *VM* 21, (p. 148,7 Jouanna; 1.570,6 L.).

³⁷ Cf. *De arte* is concerned with the craft-status of medicine, as opposed to cures being due to luck, for instance, see 4.1 (p. 227,8–12 Jouanna; 6.6,7–10 L.), and sets up as central the use of reasoning, *logismos*, to reason to that which is not openly observable, ἄδηλα, 11.1 (p. 237,5 Jouanna; 6.18,16 L.), that is, the doctor should use the “eye of the mind”, 11.2 (p. 237,11–13 Jouanna; 6.20,2–3 L.): ὅσα γὰρ τὴν τῶν ὁμμάτων ὄψιν ἐκφεύγει, ταῦτα τῇ τῆς γνώμης ὕψει κεκράτῃται. *De arte* 9.4 (p. 235,3–8 Jouanna; 6.16,10–14). Illnesses which are external (i.e., have apparent and observable causes) should be cured infallibly, because their cures have been discovered. The doctor needs to be naturally clever enough and properly educated, however, for this to come about, cf. *Loc. hom.* 46.1. (p. 84,17–20 Craik; 6.344,4–9 L.).

³⁸ The emphasis is on different *foods*, such as cheese, *VM* 20.6 (pp. 147,16–148,1 Jouanna; 1.624,5–9 L.), producing different effects on different people in different

of opposites in 14.5 (p. 136,19–20 Jouanna; 1.602,16–17 L.), which seems no more than general practical guidance to veer away from the extremes of bitterness and sweetness,³⁹ as being bad for the human constitution in general, corresponding to Aristotle's practical advice over the doctrine of the mean: if you find yourself tending to one excess, aim for the other.⁴⁰

'Empty' postulates are rejected in medicine not only because the hypothesised explanations of philosophers are of no use in diagnosis and treatment, but also because such postulates ignore the progress made as a result of the operation of the craft of medicine and the work of practitioners. The perceptual starting-point of *VM*, however,

states of health and disease. The effects of these foods are the graspable phenomena from which starting point any understanding of medicine proceeds and which an account must explain. The *qualities* of foods, however, are not referred to by means of a single technical term, suggesting that the understanding of them is not *central* to an explanatory account (the qualities are often referred to as "powers" δυνάμεις, or as "humours" χυμοί or by means of the article and neuter adjective). Since the qualities of foods are not the graspable phenomena from which an account must proceed, the qualities do not constitute hypothesised postulates as dismissed by the author in the first chapter of the treatise. Hankinson (1998, 66) appears to suggest that *VM* is objecting to *hypothesis*-based theories as the author's concern with foods is "not supposed to be an *a priori* conceptual truth", but he does not make it clear how we should understand this suggestion in connection with *VM*. In his 1990 paper, however, Hankinson (1990, 59–60), with reference to Lloyd (1976, 146–149), notes the claim that "in spite of his aversion to arbitrary hypotheses . . . our author apparently makes use of assumptions no less arbitrary and speculative". Hankinson proposes that the "author nowhere suggests that a food's strength or weakness can be inferred *a priori* from its colour, or its weight, or its name—although empirical connections can be established". That the strengths of some foods can in general be predicted to be harmful "is something that has been *discovered*, not something that has been inferred". Although Hankinson does not explain the distinction he is relying on between discovery and inference, he is correct to read *VM* as concerned with empirically-based investigation, rather than substituting the postulates he rejects with others pertaining to foods. Edelstein (1967, 352), on the other hand, notes the concern of the author of *VM* about "how the uniqueness of existing phenomena can ever be comprehended by any general theory" but is mistaken in his claim that "he therefore rejected generalizations altogether." *VM* proposes that the mapping of empirically-accessed likenesses over similar individual cases permits the formation of general understandings which can be employed in prognosis and the justification of treatment.

³⁹ As Hankinson (1990, 64) points out, the bitter and the sweet are not postulates of the sort rejected, rather they are "phenomenal properties" which are accessed empirically and are seen to be causally operative in cases of health and disease. Even if the hot, the cold, the wet and the dry were considered as phenomenal properties rather than ontological absolutes, at *VM* 15.1 (discussed above) they are said to be of no therapeutic, and so no causal, relevance.

⁴⁰ Arist., *EN* 1109 a 34–1109 b 7.

is not 'empty' as the explanations of the craft of medicine evidentially refer back to these perceptual phenomena, as postulates do not. It is at the level of everyday success and failure that medicine is relevantly understood by both lay people and experts, not at the level of postulates which are evidentially unsupported. *VM* is therefore concerned with the demand for an evidential link (that which 'empty' accounts do not provide in position (2), not proof of truth or falsity (position (3)).

The study of *VM* has opened up a major issue with which the Hippocratics wrestled: should an understanding of health and disease, and of the workings of the craft of medicine, be founded on postulates such as the hot, the cold, the wet and the dry, such as were taken to be employed by Presocratic philosophers as their fundamental explanatory elements, or should medicine be based on consideration of the day-to-day observations of doctors and the accumulated successes of their practice? Such a debate seems to have arisen partly from the concern that accumulated success alone fails to detect or engage with an underlying causal basis for disease which the postulates of the philosophers would have provided. But the latter's postulates were precisely that—postulates—as a result there seemed no way in which they could tie together theoretical explanation and practice into a single coherent theory. Of course, many details are lacking of the ways in which *VM*'s observationally-assessed correctness together with inductive inferential thought in practice makes progress stage-by-stage to a unified and complete science. The special contribution of *VM*, however, is that it sought to bridge that explanatory gap between theory and practice by championing an observation-up, not postulate-down, theory for gaining knowledge.

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ON ANCIENT MEDICINE
AND ITS INTELLECTUAL CONTEXT

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Summary

The argument of this paper is twofold. First, it shows that the ‘anthropological digression’ in chapter three of On Ancient Medicine is more original and sophisticated than is commonly supposed: the discussion of diet and of the discovery of medicine describes an empirical process that is non-teleological and subject to chance. Secondly, it shows that the programmatic claims in chapter one and elsewhere advance an empirical model of technê that is best paralleled in arguments of the later sophists. Taken together, these results find greater methodological coherence in the treatise and situate it more clearly in its intellectual context.

Although scholars agree that *On Ancient Medicine* is one of the more important treatises in the Hippocratic corpus, they continue to differ on such fundamental issues as its date (does it pre-date Anaxagoras or post-date Plato?) and its content (is it primarily medical, scientific, or sophistic?).¹ This lack of consensus is compounded by a shift in tone and direction in the opening chapters. The treatise begins with a polemic against medical writers who argue from postulates or *hypotheses*, it praises instead an empirical method, and it illustrates this method by describing the origins of human diet. Readers primarily interested in the author’s account of a primitive human condition and the gradual development of skills such as cooking and medicine tend to see him as a typical progressive of the late fifth century.² Those especially interested in the author’s polemical stance and intellectual sophistication see him as a sophistic intellectual of

¹ Diller (1952) 385–386, Lloyd (1963) 108–109, and Lichtenhaeler (1980) 9–10, catalogue the many points of scholarly disagreement.

² Thus Herter (1963) and Miller (1949); compare discussion with note 14 below.

the later fourth century.³ Those interested in his (negative) rejection of *hypotheseis* tend to see the author as a conservative, resisting the inroads of philosophy upon the traditional and practical craft of medicine.⁴ Those interested instead in the author's (positive) program of empirical method tend to view him as a pioneer *avant la lettre* of scientific empiricism.⁵ I shall argue that these conflicts are both more substantial and more illusory than is generally recognised. They are substantial because the conflicting interpretations of scholars reflect real differences in the text itself: the author is at the same time progressive in approach and sophistic in tone, an opponent of excessive abstraction and a champion of empirical method. These conflicts are illusory because the differences are not mutually exclusive: an innovative empiricist can be sophistic in tone while rejecting novel abstractions. Recognising how these contrasts cohere will let us see more clearly both the originality of this treatise and its engagement with current intellectual issues. The account of primitive society in *On Ancient Medicine* and the polemic on medical *technê* are part of a larger argument that presents a sophisticated understanding of human resources and their limits.

I begin with the anthropological narrative in chapter three, which describes the development of food, cooking, and medicine. This passage has played a leading role in the debate over ideas of 'progress' in classical antiquity, and gives one of the most detailed reconstructions of the early inventions and discoveries that separate human culture from a primitive or bestial condition.⁶ My interest here is not in the *content* of this development (i.e., the subjects of food, cooking, and medicine, and how these are described) but the *form* of this development (i.e., the manner in which various changes take place). *On Ancient Medicine* is especially original in its close attention to the temporal dimension of cultural change. First, it emphasises the *pervasiveness* of change by showing that practices and institutions are not fixed and given entities but rather arise and develop through time. Second, it emphasises the *uncertainty* of change by showing that such development is not necessary or inevitable, but is in important ways

³ Thus Diller (1952) and Lichtenhaeler (1980).

⁴ Thus Vickers (1979) and Longrigg (1963).

⁵ Thus Jones (1946) and Festugière (1948).

⁶ For recent discussions of 'progress' in antiquity, see Blundell (1986), Sihvola (1989), and Meier (1990) chapter eight.

subject to chance. To illustrate these points, I will turn to some earlier passages which offer contrasting accounts of cultural change.

In *Prometheus Bound*, which was probably written before the middle of the fifth century,⁷ the protagonist is chained to a rock as punishment for giving fire to mortals. In the course of the play, he claims responsibility for all the cultural institutions that distinguish humans from animals (*Prometheus* 436–506). He gives a lengthy description of the many benefits he has given mankind: how to build houses from bricks and wood, how to measure seasons and harvests by the settings of stars, how to record words in writing, domesticate animals, build ships, cure disease, read omens, perform sacrifices, and extract metals from the earth. “Understand it all in a single phrase,” he concludes, “all skills for mortals come from Prometheus” (βραχεῖ δὲ μύθῳ πάντα συλλήβδην μάθε·/ πᾶσαι τέχναι βροτοῖσιν ἐκ Προμηθέως. 505–506). The speech gives a full, nearly exhaustive, account of the skills and technologies humans have acquired, and in so doing, contrasts the prior helpless condition of humans with their subsequent abilities to cure disease and read the will of the gods. If we consider not the content of these institutions but the mechanism of change, we find it simple and static. At some time before, humans were foolish and blind and lived like flimsy ants (ὥστ’ ἀήσυροι/ μύρμηκες, 452–453). Then somehow (he does not explain how) Prometheus intervened to give humans intelligence and skills: “originally witless, I made them intelligent and effective in thought” (νηπίους ὄντας τὸ πρὶν/ ἔννοους ἔθηκα καὶ φρενῶν ἐπιβόλους 443–444); “in need of medicine they would wither away, until I showed them mixtures of soothing remedies with which they ward off all diseases” (480–483); “I launched mortals on the path to an obscure art and opened their eyes to fiery signs that were murky before” (497–499). There is in this account no sense of temporal development, of struggle or difficulty in acquiring new skills. Rather than a slow process of change, we have a sudden moment of transformation, a Titanic intervention that turns witless humans into intelligent and effective beings.

Yet even if the *manner* of change is superhuman and atemporal, the *fact* of change is in itself noteworthy, especially by comparison

⁷ My discussion does not rely upon authorship by Aeschylus, which has been challenged by Griffith (1977) and West (1990). Those who accept attribution to Aeschylus tend to place the play late in his career (thus Herington [1970] 119); Griffith (1977) 32 and West (1990) 53 place it in the 440s or 430s.

with Hesiod. The story of the five races in *Works and Days* (109–201) suggests, collectively, a pattern of decline, but there is no indication that a given race or *genos* can change. Each change in the human condition requires the destruction of one race and the creation of another. Thus the golden race is replaced by that of silver, silver by bronze, and bronze by the race of heroes, and Hesiod foretells a similar fate for the race of iron. Their evils are so great and afflict them so young that “Zeus will destroy this race of mortals as well when they are grey-haired at birth” (Ζεὺς δ’ ὀλέσει καὶ τοῦτο γένος μερόπων ἀνθρώπων, / εὖτ’ ἂν γεινόμενοι πολιοκρόταφοι τελέθωσιν 180–181). In Aeschylus, however, the mechanism of change is external, a momentous (and mysterious) intervention by the son of Iapetos. The human condition is nevertheless subject to change as it is not for Hesiod, who anticipates destruction rather than transformation. The fundamental notion that human society is subject to change through time is then probed more closely by subsequent writers.

The chorus in Sophocles’ *Antigone* describes the remarkable achievements that give humans mastery over the natural world. Creon has heard that someone (or something) has again dared to scatter earth upon the body of Polyneices, and the chorus members then sing an ode, the so-called ‘Hymn to Man,’ reflecting on human accomplishments. “Many things are astounding,” they begin, “but none more astounding than humankind” (πολλὰ τὰ δεινὰ κούδεν ἀνθρώπου δεινότερον πέλει, 332–333). They continue with a catalogue of human skills: sea-faring, tilling the earth, hunting and fishing, all performed by “very skillful man” (περιφραδῆς ἀνὴρ 347). The catalogue emphasises human superiority to the animals: the birds he hunts are weak in thought (κουφονόων 342), and domesticated animals he rules by his contrivances (μηχαναῖς) and fastens with the yoke (347–352). The first half of the ode does not say how humans acquired these astounding skills. Only in the second half does the chorus describe a mechanism:⁸

καὶ φθέγμα καὶ ἀνεμόεν
φρόνημα καὶ ἀστυνόμους
ὄργας ἐδιδάξατο καὶ δυσαύλων
πάγων ὑπαίθρεια καὶ
δύσομβρα φεύγειν βέλη
παντοπόρος· ἄπορος ἐπ’ οὐδὲν ἔρχεται
τὸ μέλλον. (353–61)

⁸ The text follows Lloyd-Jones and Wilson (1990); the translation is my own.

And speech, and thought like the wind, and impulses
 that organise towns, these he taught himself,
 and how to avoid harsh outdoor frosts and
 the shafts of evil rain—
 always resourceful. Whatever the future brings,
 he faces it resourcefully.

This human ability to adapt and to acquire new skills as needed is expressed in the Greek both with the unusual reflexive middle ἐδιδάξατο ("he taught himself" 356) and with the repetition in asyndeton, παντοπόρος· ἄπορος ἐπ' οὐδέν . . . ("resourceful in everything; resourceless never . . ." 360). In Aeschylus, the Titan gives humans a cornucopia of skills; in Sophocles, humans somehow possess a single talent, that of being able to discover skills on their own. This single talent not only explains all past developments, but is sufficient for whatever the future may bring. There are two limits to astounding human resourcefulness. The first is natural and absolute. "From death alone," the ode continues, "he will get no escape, but from unmanageable diseases he has devised his escapes" (361–364). Every obstacle is surmountable except for the fact that we are mortal and will die. The second limit is moral and religious. "With an ability to contrive skills that is clever beyond belief, [mankind] moves now toward evil, now toward good" (365–367). Those who respect the laws of earth and gods will prosper, while those who in their daring entertain evil will not (368–371). The generalizing morals give no specific illustration, and none is needed. The human talent for discovering new skills is so great that those who possess it risk abusing it. An awareness of moral limits does not mean that inventiveness is wrong. It simply means that this remarkable human talent carries with it a heavy responsibility. Nor does it mean that the course of development is uncertain or unpredictable. Sophocles cannot predict whether human inventiveness will at some point hold back for moral reasons, but he expresses no doubt that the discovery of new skills will otherwise continue indefinitely.

Aeschylus emphasises the *fact* of change in human culture, leaving the mechanism of change a momentary, external intervention. Sophocles describes the mechanism as internal, an innate human capacity for invention. Yet the action of this mechanism is itself unchanging. Human inventions and discoveries follow one another in a progressive development that leads to one new skill after another. Change is fundamental but invariable: inventions follow one another

without obstacles or interruptions, with a timeless constancy that leads ever onward. The chorus warns against transgressing moral limits, with the implication that if this happens, the gods will somehow punish humans and put an end to this trajectory. But that is a different story, a potential conflict between god and mortal that stands outside the human narrative of invention and discovery.

In the late fifth century, Democritus described a more complicated mechanism of cultural change. Since little survives in his own words, we must turn to Diodorus, whose account of the origins of human skills is based upon the atomists and probably derives to a large extent from Democritus.⁹ The most detailed portion of this abbreviated narrative describes the origin of language. As Diodorus reports, in the beginning:

τῆς φωνῆς δ' ἀσήμου καὶ συγκεχυμένης οὔσης ἐκ τοῦ κατ' ὀλίγον διαρθροῦν τὰς λέξεις, καὶ πρὸς ἀλλήλους τιθέντας σύμβολα περὶ ἐκάστου τῶν ὑποκειμένων γνώριμον σφίσιν αὐτοῖς ποιῆσαι τὴν περὶ ὁρίων ἐρμηνείαν. τοιούτων δὲ συστημάτων γινομένων καθ' ἅπασαν τὴν οἰκουμένην, οὐχ ὁμόφωνον πάντα ἔχειν τὴν διάλεκτον, ἐκάστων ὡς ἔτυχε συνταξάντων τὰς λέξεις· διὸ καὶ παντοίους τε ὑπάρχει χαρακτῆρας διαλέκτων . . . (1.8.3–4)

the sounds they made had no sense and were confused; but gradually they articulated their expressions, and by establishing symbols among themselves for every sort of object they made the interpretation in each case intelligible to one another. Such groups came into existence throughout the inhabited world, and not all men had the same language, since each group organised its expressions as chance had it. Hence there are languages of every type . . .

The desire to communicate is universal, and the resulting development of signs from inarticulate noises is inevitable. Yet because this happened many times over, and because in different cases different sounds were associated by chance with a given object, each group developed a different language. Hence the importance in Democritus of chance and convention: one group of humans hit upon the name “hand,” another came up with “χείρ,” and so on. The course of change is more materialistic than in Sophocles, and is able to produce plural results such as multiple languages. Yet in other respects it is relatively simple. This passage assumes that all groups of humans will somehow discover language, and Diodorus goes on to assume

⁹ For an ambitious reconstruction of Democritus' views, see Cole (1990).

that all groups follow the same trajectory: first humans learn to speak, then to build shelters, then to use fire (1.8). There is a striking parallel in Democritus' account of the universe. In the paraphrase of Hippolytus:¹⁰

ἀπείρους δὲ εἶναι κόσμους καὶ μεγέθει διαφέροντας. ἐν τισὶ δὲ μὴ εἶναι ἥλιον μηδὲ σελήνην, ἐν τισὶ δὲ μείζω τῶν παρ' ἡμῖν καὶ ἐν τισὶ πλείω. εἶναι δὲ τῶν κόσμων ἄνισα τὰ διαστήματα καὶ τῇ μὲν πλείους, τῇ δὲ ἐλάττους καὶ τοὺς μὲν αὖξεσθαι, τοὺς δὲ ἀκμάζειν, τοὺς δὲ φθίνειν, καὶ τῇ μὲν γίνεσθαι, τῇ δ' ἐκλείπειν. φθείρεσθαι δὲ αὐτοὺς ὑπ' ἀλλήλων προσπίπτοντας. (Democritus 68 A 40, D–K)

There are innumerable worlds, which differ in size. In some worlds there is no sun and moon, in others they are larger than in our world, and in others more numerous. The intervals between the worlds are unequal; in some parts there are more worlds, in others fewer; some are increasing, some at their height, some decreasing; in some parts they are arising, in others failing. They are destroyed by collision one with another . . .

For Democritus, the mechanics of material process are universal (separation, revolution, attraction of like to like), and the resulting generation of worlds or κόσμοι seems inevitable, as does the development of language. What makes Democritus' system complex is not a variation in the mechanism of change, but a variety of what we would call initial conditions—differences in the number and arrangement of atoms. Each stretch of beach is different, even though the same action of separating fine sand from pebbles is at work everywhere (B 164), and each society and world is different even though they develop in the same ways.¹¹ The variety of observed phenomena, and the chance differences among languages, customs and so on, are parallel outcomes of the same necessary patterns (hence Democritus' general claim that nature operates by necessity, A 66). His mechanism differs from that of Sophocles in two ways. First, in Sophocles there is no variation through time: invention follows invention in constant succession, while in Democritus one stage leads to another in organic sequence (the 'growth' of human society, or the 'birth' and 'death' of worlds). Second, Sophocles make no allowance for

¹⁰ Citations of Democritus and other presocratics follow the text and numeration of Diels and Kranz (1952).

¹¹ For a discussion of world-formation in Democritus, see Guthrie (1965) II. 404–13, who notes in particular the organic pattern involved (408).

the chance variations by which an identical mechanism produces different worlds or different languages in different places.

On Ancient Medicine introduces a further degree of complexity to the mechanism of change. Like Sophocles and like our reconstructed Democritus, the medical writer in chapter three describes a progression in which more and more cultural skills are acquired, both in preparing food and in practicing medicine. These skills are cumulative, since humans first had to learn which foods were edible and which not, then learn the techniques of baking and boiling, then learn the best ways to combine foods. This text is most explicit about the mechanism of change, which results from the need or necessity of circumstances:

Τὴν γὰρ ἀρχὴν οὐτ' ἂν εὐρέθῃ ἡ τέχνη ἢ ἱητρικὴ οὐτ' ἂν ἐξητήθῃ—οὐδὲν γὰρ αὐτῆς ἔδει—εἰ τοῖσι κάμνουσι τῶν ἀνθρώπων τὰ αὐτὰ διαιτωμένοις τε καὶ προσφερομένοιςιν ἅπερ οἱ ὑγιαίνοντες ἐσθίουσί τε καὶ πίνουσι καὶ τᾶλλα διαιτέονται συνέφερον καὶ μὴ ἦν ἕτερα τούτων βελτίω. Νῦν δὲ αὐτὴ ἡ ἀνάγκη ἱητρικὴν ἐποίησεν ζητηθῆναι τε καὶ εὐρεθῆναι ἀνθρώποις, ὅτι τοῖσι κάμνουσι ταῦτ' προσφερομένοιςιν ἅπερ οἱ ὑγιαίνοντες οὐ συνέφερον, ὥς οὐδὲ νῦν συμφέρει. Ἔτι δ' ἄνωθεν ἔγωγε ἀξιώ οὐδ' ἂν τὴν τῶν ὑγιαίνόντων δίαίταν τε καὶ τροφήν, ἥ νῦν χρέωνται, εὐρεθῆναι, εἰ ἐξήρκει τῷ ἀνθρώπῳ ταῦτ' ἐσθίοντι καὶ πίνοντι βοί τε καὶ ἵπῳ καὶ πᾶσιν ἐκτὸς ἀνθρώπου, οἷον τὰ ἐκ τῆς γῆς φυόμενα, καρπούς τε καὶ ὕλην καὶ χόρτον· ἀπὸ τούτων γὰρ καὶ τρέφονται καὶ αὔξονται καὶ ἄπονοι διάγουσιν οὐδὲν προσδεόμενοι ἄλλης διαίτης. Καί τοι τὴν γε ἀρχὴν ἔγωγε δοκέω καὶ τὸν ἄνθρωπον τοιαύτῃ τροφῇ κεχρησθαι. (3.1–3; 1.574–576 L.)¹²

In the beginning the craft of medicine would not have been found or searched for (since there was no need for it), if sick people in their way of life and diet benefited from the same things which the healthy eat and drink and otherwise make use of, and if there was nothing better than these. But necessity itself caused men to search for and find medicine, since the sick did not benefit from the same things as the healthy, just as they do not today. Going further back, I do not think that the way of life and food which the healthy now use would have been found, if it were enough for a human to eat and drink the same things as a cow and a horse and all other animals, namely things that grow from the earth—fruits and wood and grass. On these, animals are nursed and grow and live without trouble, and need no other food. And I think that in the beginning humans also used this kind of food.

¹² Citations of *On Ancient Medicine* follow the text of Jouanna (1990) and his numeration, with Littré's page numbers; translations are my own.

As in Democritus, change depends to some extent upon the circumstances. In Democritus, different circumstances led by chance to different names or larger worlds, but the development of speech and worlds is inevitable. It is therefore reasonable to speak of teleology in Democritus:¹³ given a group of primitive human beings, we can predict that it will advance through certain stages of development even if these look different from those of other groups, and that it will develop a language even if this assigns different names than other languages. More generally, given suitable matter to form a *kosmos* we can predict that it will organise itself in certain ways and that it will eventually decay, even if we cannot predict exactly what form this organisation will take. In *On Ancient Medicine*, by contrast, circumstances determine whether change occurs at all. Human constitutions happen to be different from those of horses, and our inability to digest wood and grass led by necessity to the development of cooking, just as the inability of those who are sick to tolerate the same foods led to the art of medicine. But our author states explicitly that if they had not been different, these arts would never have developed. As he repeats at a later point in the treatise, if the same foods were suited to healthy people and to sick, no one would ever have discovered medicine (οὐδ' ἂν ζητῆσαι ἰητρικὴν δοκεῖ οὐδεὶς, εἰ ταῦτά διαιτήματα τοῖσί τε κάμνουσι καὶ τοῖσιν ὑγιαίνουσιν ἤρμοζεν, 5.1; 1.580 L.). The large-scale or macroscopic inevitability of Democritus is absent. And what is absent at the beginning is absent later. The process of developing and refining these skills may or not succeed:

Τὰ δὲ νῦν διαιτήματα εὐρημένα καὶ τετεχνημένα ἐν πολλῷ χρόνῳ γεγενῆσθαι μοι δοκεῖ. Ὡς γὰρ ἔπασχον πολλά τε καὶ δεινὰ ὑπὸ ἰσχυρῆς τε καὶ θηριώδους διαίτης ὡμά τε καὶ ἄκριτα καὶ μεγάλας δυνάμειας ἔχοντα ἐσφερόμενοι—οἷά περ ἂν καὶ νῦν ὑπ' αὐτῶν πάσχοιεν πόνοισι τε ἰσχυροῖσι καὶ νούσοισι περιπίπτοντες καὶ διὰ τάχους θανάτοισιν. Ἦσσον μὲν οὖν ταῦτα τότε εἰκὸς ἦν πάσχειν διὰ τὴν συνήθειαν, ἰσχυρῶς δὲ καὶ τότε, καὶ τοὺς μὲν πλείστους τε καὶ ἀσθενεστέρεν φύσιν ἔχοντας ἀπόλλυσθαι εἰκός, τοὺς δὲ τούτων ὑπερέχοντας πλείω χρόνον ἀντέχειν, ὥσπερ καὶ νῦν ἀπὸ τῶν ἰσχυρῶν βρωμάτων οἱ μὲν γὰρ ῥηϊδίως ἀπαλλάσσονται, οἱ δὲ μετὰ πολλῶν πόνων τε καὶ κακῶν. (3.3–4; 1.576 L.)

¹³ Hirsch (1990) argues that it is wrong to consider Democritus “anti-teleological” both because the term is anachronistic (clear and explicit definitions of teleology begin with Aristotle) and because some of his arguments involve an implicit notion of teleology.

Present ways of life were found and fashioned, it seems to me, over much time. For they suffered greatly and terribly from a violent and bestial way of life when they took food that was raw and unmixed and of strong qualities—just as today they would also suffer from these things, falling with violent pain and disease and swift death. At one time they probably suffered less, being used to it, but severely even then, and most of them, having weaker natures, probably died, while the stronger ones held out for a longer time, just as today some deal easily with harsh foods, while others do so with great pain and trouble.

Because the process of discovery depends upon the circumstances, we cannot predict when and where it will occur—or even that it will occur at all. Our author points out in chapter five that foreign peoples and some Greeks failed to develop medicine altogether. He points out (chapters five and six) that in the early stages of medical practice, mistakes would have been made that did more harm than good. Even today, he reminds us, mistakes are inevitable and experiments with diet may harm or even kill a person (13.1–2; 1.598 L.). The extended comparison of most doctors with poor pilots in chapter nine indicates that errors often pass unnoticed, and that even the very best doctor cannot avoid mistakes. “I would strongly praise that doctor who makes small errors,” he concludes, “for precision is rarely seen” (κἂν ἐγὼ τοῦτον τὸν ἱητρὸν ἰσχυρῶς ἐπαινέοιμι τὸν σμικρὰ ἁμαρτάνοντα,—τὸ δὲ ἀτρεκέες ὀλιγάκις ἔστι κατιδεῖν, 9.4; 1.590 L.).

My first conclusion is therefore that the author of *On Ancient Medicine* not only is more explicit in explaining how change takes place in human culture, but describes a process that is pervasive, uncertain, and unpredictable. By contrast with the admittedly brief and poetic outline in Sophocles or the fragmentary account in Democritus, the medical writer describes change as fully dependent upon present circumstances and directed neither by human nature nor by the necessities of matter. All of these accounts in their own ways try to make change intelligible. A crucial difference is that Sophocles’ lyrics describe an innate and unchanging talent for invention, and the fragments of Democritus sketch patterns or cycles that follow from the properties of matter, whereas the narrative in *On Ancient Medicine* describes the collective needs of humans that may or may not produce a discovery, depending on the circumstances of the moment and the resourcefulness of those involved. I therefore respectfully disagree with those scholars who describe this part of the treatise as conventional in the sense that it presents the same view of progress as

Aeschylus, Sophocles and Euripides. Hans Herter calls our author a “child of his times;”¹⁴ I would call him a pioneer instead.

There are possible objections to my interpretation, and these lead me into the second part of my argument, which has to do with the notorious problem of the author’s programmatic stance. One objection involves the supposed optimism of *On Ancient Medicine*.¹⁵ The treatise certainly expresses a confidence in the art of medicine. According to the method it describes, we are told in chapter two, “many excellent discoveries have been made in the course of time, and the rest will be discovered if one is competent, and aware of prior discoveries, and starts one’s own inquiry from these” (πολλά τε καὶ καλῶς ἔχοντα εὔρηται ἐν πολλῷ χρόνῳ, καὶ τὰ λοιπὰ εὔρεθήσεται, ἣν τις ἱκανὸς τ’ ἐὼν καὶ τὰ εὔρημένα εἰδὼς ἐκ τούτων ὁρμώμενος ζητῇ. 2.1; 1.572 L.). After describing the doctor’s empirical method, the author concludes in chapter 8, “all these are indications that the entire craft of medicine can be discovered if it is followed in the same way” (ταῦτα δὴ πάντα τεκμήρια ὅτι αὐτὴ ἡ τέχνη πᾶσα ἢ ἱητρικὴ τῇ αὐτῇ ὁδῷ ζητεομένη εὐρίσκοιτο ἄν. 8.3; 1.588 L.).

Yet it is one thing to express optimism, and quite another to believe that a course of development is necessary or predictable. Notice first the conditions necessary for further discoveries: *if* one is competent, *if* one knows prior discoveries, and *if* one starts from those (2.1; 1.572 L.) and, more generally, *if* one follows the same method (8.3; 1.588 L.). Recall also the author’s awareness of the many difficulties and the many opportunities for failure (noted above). As Jacques Jouanna puts it, by comparison with other Hippocratic treatises, “the author of *On Ancient Medicine* is remarkable for his gradualist and open view of the evolution of the art.”¹⁶ I would go further and state that he rejects the notion of necessary or inevitable development, and that he would not endorse the organic development often associated with our concept of ‘evolution.’ Our author does not express confidence in a large-scale mechanism of change, like the world-formation of Democritus.¹⁷ Nor does he express confidence

¹⁴ Thus Herter (1963) 470; similarly Blundell (1986) 179–180 and Jouanna (1999) 239.

¹⁵ “Just the same, he remains an optimist,” Jouanna (1999) 238; compare previous note.

¹⁶ Jouanna (1999) 238.

¹⁷ As Mark Schiefsky argues elsewhere in this volume, our author likewise rejects

that change is always for the better. He has a conditional confidence in *technê*, in the practice of medicine, and proclaims his hope or expectation that “the rest will be discovered” in order to rally other practitioners to his cause. As Julie Laskaris argues, the early Hippocratic treatises were, in part, protreptic or proselytising speeches.¹⁸ If others fail to follow his empirical method, our author argues, the excellent discoveries of medicine may be lost.

Another objection involves an apparent conflict between the account of cultural development, with its pioneering interest in the mechanism of change, and the beginning of the treatise, with its rejection of abstract postulates or suppositions. In rejecting *hupotheseis* and defending the traditional practice of medicine, the author seems to reject a newer and more rational or philosophical form of medicine and to argue for returning to an older one. He “bitterly opposes” newer forms of medicine, as Ludwig Edelstein puts it, and believes that “only by following the example that was set of old can further discoveries be made.”¹⁹ The sophisticated and revisionist author of the section on human development would thus seem to be at odds with the naive or reactionary author of the work as a whole. To this we might add the apparent conflict between the work’s sophistic flourishes and its positivistic, empirical method. I shall argue that these are false contradictions. The rejection of *hupotheseis*, the reliance upon the senses, and the call for a strictly empirical method, are all pioneering in spirit, and the whole treatise can be read as a contribution to the intellectual ferment of the late fifth century.

Let us begin at the beginning. The treatise starts with a challenge that is bold and sophisticated: “All who have tried to speak or write about medicine are clearly wrong when they propose to rest their argument upon a supposition (*hupothesis*)” (ὁκόσοι μὲν ἐπεχείρησαν περὶ ἱητρικῆς λέγειν ἢ γράφειν ὑπόθεσιν αὐτοὶ ἐωντοῖσιν ὑποθέμενοι τῷ λόγῳ . . . καταφανεῖς εἰσιν ἁμαρτάνοντες. 1.1; 1.570 L.).²⁰ For all

developmental models such as that of Empedocles, for whom suppositions about an organism’s origins account for its behavior at later stages.

¹⁸ See Laskaris (2002), especially chapter three. She explains the “grandstanding” of *On the Sacred Disease* as “rhetorical posturing in a highly competitive environment” (91). Compare Thomas (1993) 233–237 on the early Hippocratic treatises as competitive rhetorical performances.

¹⁹ Edelstein (1967) 38.

²⁰ The boldness of this opening assertion is often diluted by translators who restrict error to a smaller class. Thus Jones (1923) translates, “All who, on attempting to speak or to write on medicine, have assumed for themselves a postulate as a basis

the rhetorical inflation of this opening salvo, our author gives clear epistemological reasons for his position.²¹ It is appropriate to make suppositions, he explains, only in connection with invisible and insoluble matters. “Even if one were to speak of these things and know how they work, it would remain unclear to both speaker and listener whether they are true or not, since there is nothing to compare them with, which clear knowledge requires” (. . . οὐ γὰρ ἔστι πρὸς ὃ τι χρὴ ἐπανενέγκοντα εἰδέναι τὸ σαφές. 1.3; 1.572 L.). There is no clear knowledge *a priori*, he tells us. Knowledge in general must follow from observation, not from suppositions. Likewise knowledge of food in particular must follow from careful observation, since we cannot know beforehand which foods are good and which are bad; as he explains at length in chapters six through eight, what is healthy for one person will harm another. Rather than rejecting new ideas, the author advances a full-fledged materialism and argues that knowledge rests strictly upon matter and sensation; as he puts it in chapter nine, “you cannot find any measure, neither number nor weight, that you can appeal to for accurate knowledge except bodily sensation” (μέτρον δὲ οὐδὲ ἀριθμὸν οὔτε σταθμὸν ἄλλον πρὸς ὃ ἀναφέρων εἴη τὸ ἀκριβές, οὐκ ἂν εὔροις ἄλλ’ ἢ τοῦ σώματος τὴν αἴσθησιν. 9.3; 1.588–590 L.). The argument that the senses are the only reliable criterion was common among the sophists, and the rejection of abstract suppositions is most notoriously illustrated by Antiphon’s squaring of the circle: if the sides of a polygon are sufficiently small, it is identical to a circle (87 B 13, D–K)—presumably because a circle is a line we perceive as round, not some abstract entity, and a polygon of sufficiently small sides we perceive as round.²²

This tendentious empiricism is closely connected to the author’s argument that medicine is a skill or *technê* involving techniques that must be learned, and may be applied with greater or lesser skill:

for their discussion . . . obviously blunder,” as if reading ὁκόσοι μὲν ὑπόθεσιν ὑπέθεσαν ἐπιχειροῦμενοι περὶ ἱητρικῆς λέγειν ἢ γράφειν . . . εἰσιν ἁμαρτάνοντες. Jouanna (1990) likewise reverses the main verb and the participle. Chadwick and Mann (1978) are more accurate: “In all previous attempts to speak or write about medicine, the authors have introduced certain arbitrary postulates . . .”

²¹ This rhetorical inflation makes it less likely that the author is attacking one individual (thus Lloyd [1963], arguing for a polemic against Philolaus) than broadly contrasting general methods (thus Schiefky in this volume, arguing that the author rejects the developmentalism of cosmologists such as Empedocles).

²² On the priority Antiphon gives to the senses, and his corresponding rejection of abstractions, see Dunn (2002) 212–213.

Εἰσὶ δὲ δημιουργοὶ οἱ μὲν φλαῦροι, οἱ δὲ πολλὸν διαφέροντες· ὅπερ, εἰ μὴ ἦν ἱητρικὴ ὅλως μὴδ' ἐν αὐτῇ ἔσκεπτο μὴδ' εὕρητο μὴδέν, οὐκ ἂν ἦν, ἀλλὰ πάντες ἂν ὁμοίως αὐτῆς ἄπειροί τε καὶ ἀνεπιστήμονες ἦσαν, τύχῃ δ' ἂν πάντα τὰ τῶν καμνόντων διοικεῖτο. Νῦν δ' οὐχ οὕτως ἔχει, ἀλλ' ὥσπερ καὶ τῶν ἄλλων τεχνέων πασέων οἱ δημιουργοὶ πολλὸν ἀλλήλων διαφέρουσι κατὰ χεῖρα καὶ κατὰ γνώμην, οὕτω δὲ καὶ ἐπὶ ἱητρικῆς. (1.2; 1.570–572 L.)

Some practitioners are poor and some are much better, which would not be the case unless medicine fully existed and involved continual inquiry and discovery—but all would be equally ignorant and inexperienced of it, and all care of the sick would be governed by chance. That is not how it is, but just as the practitioners of all other crafts differ greatly in skill and knowledge, so also in medicine.

This is an ambitious claim, summarizing in a few lines the kinds of claims sophists made for the *technai* of rhetoric and civic excellence—that these are specialised crafts that can be acquired by inquiry and practice.²³ Just as our author proudly points out that some practitioners will be better than others, Protagoras explains in Plato's dialogue that some practitioners of civic excellence will be more effective than others (*Protagoras* 327 a–b).

Despite its intellectual sophistication, one feature of the treatise has inclined scholars to consider it retrograde, belonging either to a conservative in the larger 'quarrel between old and new,' or to a naive doctor resisting the inroads of philosophy upon medicine.²⁴ This feature is the rhetoric which explicitly praises the old method by which medicine has made its discoveries:

Οὐ φημι δὲ δεῖν διὰ τοῦτο τὴν τέχνην ὥς οὐκ εἶδον οὐδὲ καλῶς ζητεομένην τὴν ἀρχαίην ἀποβαλέσθαι, εἰ μὴ ἔχει περὶ πάντα ἀκρίβειαν, ἀλλὰ πολὺ μᾶλλον διὰ τὸ ἐγγὺς οἶμαι τοῦ ἀτρεκεστάτου ὁμοῦ δύνασθαι ἥκειν λογισμῷ ἐκ πολλῆς ἀγνωσίης θαυμάζειν τὰ ἐξευρημένα ὥς καλῶς καὶ ὀρθῶς ἐξεύρηται καὶ οὐκ ἀπὸ τύχης. (12.2; 1.596–598 L.)

It follows that we must not reject the old *technê* as non-existent or poorly investigated if it lacks accuracy about everything; on the contrary, I think we should admire what it has discovered, since it came

²³ On the discussion of *technê* in *On Ancient Medicine*, compare Miller (1955) and Heinimann (1961).

²⁴ A conservative in the quarrel between old and new: Jouanna (1999) 232 (noting the contradiction this entails); a doctor resisting the inroads of philosophy: Vickers (1979).

by reasoning from much ignorance to approach great accuracy, and did so by good and true inquiry, not by chance.

I say “rhetoric” praising τὴν ἀρχαίην τέχνην because the paradoxical rehabilitation of old or conventional notions was a hallmark of the later sophistic period.²⁵ The Anonymus Iamblichi, for example, maintains the importance of law and justice, but argues that they must be founded upon self-interest (DK 89 B 3). Prodicus praises an excellence that involves hard work, moderation and good reputation and condemns wickedness, pleasure and self-indulgence; his reasons, however, are unconventional both in form and in content: the personified Excellence appeals not to Heracles’ innate virtue or his ancestry in describing the advantages of a virtuous life, but to his own interests (DK 84 B 2). Thrasy machus explicitly praises the “ancestral constitution,” although to judge from other fragments, he is likely to have based such praise upon a shocking calculus of power (DK 85 B 1; compare 6a). *On Ancient Medicine* follows the same rhetorical strategy. The old practice of medicine is praised not because it is venerable or has some kind of innate and long-standing authority. The old *technê* is praised because it is based strictly upon the senses and involves an empirical method founded on a calculus of self-interest: in each situation one must ask, ‘will this food be harmful or will it help?’

Some scholars have already noted sophistic features in *On Ancient Medicine*. Hermann Wanner (1939) considers the work a doctor’s pamphlet influenced here and there by contemporary sophistic ideas. Felix Heinimann (1961) points out that it shares with sophistic works a sustained interest in theorizing *technê*. I would go further and suggest that *On Ancient Medicine* is an important intellectual work in its own right, one that stands at the forefront of the later sophistic period. Against those who would find certainty in suppositions such as hot and cold, our author argues that the medical craft has no certainty at all—except in careful observations, skilled inferences from those observations, and a body of practitioners willing and able to accumulate this kind of empirical knowledge. The old *technê* is right after all, but only when founded upon a sophisticated model of empirical method. I will conclude with one more illustration, bringing us back to the treatise’s heightened interest in the uncertainties of change.

²⁵ On rehabilitation of the ‘virtues’ among the later sophists, compare de Romilly (1992) chapter seven.

The sophists, to Plato's dismay, theorised the concrete and the practical. They were interested in effective rhetoric and effective government. Insofar as *On Ancient Medicine* is sophistic, they were interested in effective medicine. And at least one of them was interested in effective advice. The fragments of Antiphon, like those of Democritus, are full of aphorisms offering practical advice on how best to conduct one's life. In fact, Antiphon was nicknamed 'Nestor' because (as he claimed) his advice could cure any suffering, however great (DK 87 A 6). One fuller example of this practical concern is Antiphon's account of the choices and uncertainties facing a typical young man. The fragment begins as a young man enters a new stage in his life:²⁶

Φέρε δὴ προελθέτω ὁ βίος εἰς τὸ πρόσθεν καὶ γάμων καὶ γυναικὸς ἐπιθυμῶν·
 Αὕτη ἡ ἡμέρα, αὕτη ἡ νύξ καινοῦ δαίμονος ἄρχει, καινοῦ πότμου·
 μέγας γὰρ ἀγὼν γάμος ἀνθρώπῳ. Εἰ γὰρ τύχοι μὴ ἐπιτήδεια γενόμενα, τί
 χρὴ τῇ συμφορᾷ χρῆσθαι; χαλεπαὶ μὲν ἐκπομπαί, τοὺς φίλους ἐχθροὺς
 ποιῆσαι, ἴσα φρονούντας, ἴσα πνέοντας, ἀξιώσαντα καὶ ἀξιοθέντα· χαλεπὸν
 δὲ κεκτήσθαι κτῆμα τοιοῦτον, δοκοῦντα ἡδονὰς κτᾶσθαι λύπας ἄγεσθαι. . . .
 (DK 87 B 49)

Well then, let his life advance forward, and let him desire marriage and a wife. That day, that night, is the beginning of a new life, a new fate. Marriage is a great gamble for a man. If the wife turns out to be incompatible, what should he do in this situation? Divorce is difficult, making enemies of his friends, men who think and breathe like him, whom he thought worthy and who thought him worthy [of this alliance]. But it is also hard to keep such a possession, getting vexations where he expected to acquire pleasure.

Embarking on marriage, which might have seemed a fairly simple decision, turns out to be exceedingly complex, both because the young man cannot foresee if the wife will be compatible, and also because marriage will involve him in important social alliances that cannot easily be undone. Antiphon goes on to say that even if the woman *is* compatible, she will bring more work because he will now have two people to look after:

οὐκ οὖν δῆλον ὅτι γυνὴ ἀνδρὶ, ἐὰν ᾗ καταθυμία, οὐδὲν ἐλάττους τὰς
 φιλοφροσύνας παρέχεται καὶ τὰς ὁδύνας ἢ αὐτὸς αὐτῷ ὑπὲρ τε τῆς ὑγιείας
 δισσῶν σωμάτων ὑπὲρ τε τοῦ βίου [καὶ] τῆς συλλογῆς ὑπὲρ τε τῆς σωφρο-
 σύνης καὶ τῆς εὐκλείας. Φέρε δὴ, καὶ παῖδες γενέσθωσαν· φροντίδων ἤδη

²⁶ I follow the text of Pendrick (2002).

πάντα πλέα καὶ ἐξοίχεται τὸ νεότησιον σκίρτημα ἐκ τῆς γνώμης καὶ (τὸ) πρόσωπον οὐκέτι τὸ αὐτό. (DK 87 B 49)

So isn't it clear that a wife, even if she is after a man's heart, gives him no less affection and distress than he gives himself, since he must now look after the health of two bodies and their sustenance and their moderation and their reputation? Well then, suppose children are born as well. Then everything is full of worries, and the youthful skip is gone from his mind, and his face is no longer the same.

At this point Antiphon moves on to the next stage of a man's life, with all of its uncertain pleasures and troubles.

Antiphon is concerned, not with the uncertain collective experience of earlier humans or later doctors, but with one person's experience, and he colours his narrative with the young man's anticipations of the future and regrets for the past. Even so, the sophistic 'Nestor' and the medical *technites* share an interest in the uncertainties of experience. In chapter thirteen the author of *On Ancient Medicine* renews his attack upon an abstract method by considering a concrete situation. Suppose a man is sick and his constitution weak: will he be helped more by adapting his diet to his weakened condition, or by following suppositions concerning hot and cold, moist and dry? Clearly, the empirical approach is more effective. Yet at this point our author stops himself. Yes, it is more effective, but it will never be entirely effective. Because we cannot anticipate every contingency, and because we cannot know the effect of every kind of food upon every kind of person, the doctor must accept uncertainty in his craft:

Οἶδα μὲν γὰρ καὶ τάδε δήπου ὅτι διαφέρει ἐς τὸ σῶμα τοῦ ἀνθρώπου καθαρὸς ἄρτος ἢ ξυγκομιστὸς ἢ ἀπίστων πυρῶν ἢ ἐπιτισμένων ἢ πολλῶ ὕδατι πεφυρημένος ἢ ὀλίγῳ (ἢ) ἰσχυρῶς πεφυρημένος ἢ ἀφύρητος ἢ ἔξοπτos ἢ ἔνωμος, ἅλλα τε πρὸς τούτοισι μυρία. ὥς δ' αὐτῶς καὶ περὶ μάζης . . . (14.1; 1.600 L.)

Of course I also know that it makes a difference for a person's body whether bread is refined or coarse, made of winnowed or unwinnowed wheat, kneaded with much or little water, heavily kneaded or unkneaded, fully baked or undercooked, and countless other things as well. And the same is also true of barley . . .

This acceptance of the need to face bewildering uncertainties, and somehow struggle through them without *a priori* certainties, makes our Hippocratic author a comrade of Antiphon's man entering adult

life. Thus *On Ancient Medicine*, in its account of cultural development, in its call for an empirical method, and even in its practical wisdom, holds an important place in the intellectual world of late fifth-century Greece.

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ON ANCIENT MEDICINE ON THE NATURE OF HUMAN BEINGS

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Summary

This paper discusses the theory of human nature (phusis) presented in On Ancient Medicine. In contrast to thinkers who claimed that medicine must be based on an account of the origin and development of human beings out of elemental constituents, the author of this treatise argues that the true foundation of medicine is knowledge of the humoral constitution of different individuals and of the interactions of the internal organs with fluids and air in the body. Such knowledge is limited in scope and can be attained only by reasoning from everyday experience and experience in medicine.

In this paper I shall attempt to bring out the distinctive character of the theory of human nature (*phusis*) developed by the author of the Hippocratic treatise *On Ancient Medicine* (*De vetere medicina*, *VM*). Scholars have long recognised that the methodological dispute between the author of this text and his opponents marks a crucial moment in the development of the relationship of medicine and philosophy in ancient Greece. The author's vigorous attack on his opponents, who advocate adopting a philosophical foundation for medical practice, has attracted a great deal of scholarly attention. But perhaps because of the very success of the author's criticism, the originality of his own positive proposals has attracted rather less attention. It has sometimes escaped notice that the author of *VM*, far from renouncing the need for medicine to be based on knowledge of human *phusis*, in fact considers a certain kind of knowledge of human *phusis* to be essential for medical practice and sets out a coherent and highly original method of attaining it. My goal here is to give an account of the character of this theory and to place it in context by contrasting it with a style of theorising about human *phusis* that found numerous representatives in philosophical and medical writers of the fifth and fourth centuries BC. I shall do this by means

of a close examination of chapter 20 of the text, where the issue of what kind of *phusis* theory should be adopted as a foundation for medicine comes into sharp focus.

I begin by offering a translation of chapter 20 and a summary of its contents:¹

20 1 Now concerning these matters I think that I have given an adequate exposition of my views. But some doctors (*iêtroî*) and sophists (*sophistai*) say that it would be impossible for anyone to know medicine who does not know what the human being is, and that anyone who is going to treat patients correctly must learn this. Their account tends towards philosophy (*philosophiê*), just like Empedocles or others who have written about nature (*phusis*) from the beginning, what the human being is and how it originally came to be and from what things it was compounded. **2** But I say that whatever has been said or written about nature (*phusis*) by a sophist or doctor pertains less to the art of medicine than to writing (*graphikê*), and I think that it is impossible to have clear knowledge about nature (*phusis*) from any source other than medicine. This can be acquired when one has correctly comprehended all of medicine, but until then it is impossible—I mean this science (*historiê*) that consists in knowing what the human being is and by what causes it comes to be and all the rest, with precision. **3** For this I think is what it is necessary for a doctor to know about nature (*phusis*) and to make every effort to know, if he is going to fulfill any of his obligations: what the human being is in relation to foods and drinks and other practices, and what will be the effect of each thing on each individual—not simply that “cheese is harmful food, for it causes trouble to one who eats a lot of it,” but rather what trouble, and why, and which of the things in the human being it is inimical to. **4** For there are many other harmful foods and drinks that affect the human being in a different way. Accordingly, let me take this example: “unmixed wine, drunk in large quantities, affects human beings in a certain way.” All who see this would recognise that this is the power (*dunamis*) of wine and that it alone is responsible; as for the things in the human being that it is especially able to affect in this way, we know what they are. **5** This is the sort of truth that I want to be revealed in other cases as well. For cheese (since I have made use of this example) does not harm all human beings alike: there are some who can eat their fill of it without being harmed at all, and

¹ All translations from *VM* are my own, based on Jouanna’s text (Jouanna 1990). I have also adopted the section divisions from his edition. Translations of other texts are my own unless otherwise indicated. For further elaboration and justification of the argument presented in this paper, see Schiefsky (2005).

indeed it provides a wondrous strength to those whom it benefits; but there are others who have difficulty coping with it. **6** Accordingly the natures (*phusies*) of these people differ, and the difference concerns the very thing in the body that is hostile to cheese and is stirred up and set in motion by it. Those in whom such a humour (*chumos*) happens to be present in greater quantity and to exert more power in the body will naturally suffer more; but if cheese were bad for human nature (*phusis*) in general, it would harm all people. (pp. 145.17–148.2 Jouanna; 1.620–624 L.)

The author attacks thinkers who claim that a doctor needs knowledge of “what the human being is” (ὅ τι ἐστὶν ἄνθρωπος) in order to treat patients correctly. He responds that this procedure “tends towards philosophy” in the manner of Empedocles and others, who attempt to explain how human beings first arose and the constituents from which they were formed. In section 2 the author rejects the claim that this kind of knowledge of human *phusis* is necessary to treat patients correctly: everything these thinkers have said or written “concerning nature” (*peri phusios*) is more appropriate to writing (*graphikê*) than to medicine. But his claim is not that such knowledge is unattainable; on the contrary, he argues that it can be attained, if one masters medicine first. His position is that it is impossible to know anything clearly “about nature” (*peri phusios*) *except* from medicine, where knowledge “about nature” is the knowledge of human origins and development that his opponents claim is a necessary prerequisite to therapy: “I mean this science (*historiê*) that consists in knowing what the human being is and by what causes it comes to be and all the rest, with precision.” Despite the vehemence of the author’s tone in the opening two sections of the chapter, it becomes clear in section 3 that it is not the claim that medicine needs to be based on a theory of human *phusis* that he rejects. Rather, what he objects to is the attempt to make a particular sort of *phusis* theory the foundation of medical practice. In section 3 he emphatically states that the doctor must know “what the human being is in relation to foods and drinks and other practices” and “what will be the effect of each thing on each individual.” The doctor’s knowledge must go beyond crude generalisations such as “cheese is harmful food, for it causes trouble to one who has eaten a lot of it”: he must be able to specify the precise nature of the trouble, its cause, and the thing in the body that it harms. The remainder of the chapter presents two examples that are meant to clarify the nature of the

doctor's knowledge. The first example (section 4) appeals to differences between foods: other foods and drinks, such as wine, can cause harm, but they do not affect human beings in the same way as cheese. The effect of drinking too much wine is different from the effect of eating too much cheese, and the doctor must know what these effects are and how they are caused. The second example (sections 5–6) appeals to the variation between different individuals. Cheese when eaten in large amounts is not harmful to all; while some are harmed by it, it is beneficial to others. These individuals differ in *phusis*, and these differences are understood as differences in their humoral constitution: those in whom the humour hostile to cheese is present in greater quantity or in greater concentration suffer more by eating it. Cheese is not harmful to human nature in general; if it were, it would harm all people in a similar way.

Before turning to a closer examination of the type of *phusis* theory that the author rejects here as irrelevant to medicine, I want to make two preliminary points. First, it is clear from this summary that the issue between the author and his opponents is not whether medicine should be based on a theory of human *phusis*, but rather what sort of theory it should be based on. The author is no sceptic about the possibility of acquiring knowledge of human *phusis*. His point is not that a knowledge of human origins and development is unattainable, only that it is irrelevant to medicine. Indeed he states quite clearly that the knowledge of human origins and development which his opponents purport to have can be acquired, though not by the method they follow. I shall return to this remarkable claim at the end of this paper. For the moment, I want only to stress that the author shares with his opponents the assumption that medicine must be based on a theory of human *phusis*. This is just one illustration of the fact that despite the vehemence of the author's attack on his opponents, he and they actually share a good deal of common ground. In particular, they share a conception of medicine as a *technê*, an art or science made up of a set of procedures organised in a highly systematic fashion and based on an understanding of the *phusis* of its subject matter: the human body and the various factors that account for health and disease. This conception of *technê* was later developed by philosophers such as Plato and Aristotle and came under intense scrutiny in the debate between the so-called Rationalist and Empiricist doctors in the Hellenistic period; but the evidence suggests that it

was first clearly articulated within medicine itself, quite independently of the epistemological concerns that drove this later debate. We can grasp one reason why this conception arose in medical circles by considering the opposition between *technê* and *tuchê* (chance) that was a characteristic theme in Greek thought from the middle of the fifth century BC. As is well known, a number of Hippocratic authors were concerned to establish the status of medicine as a genuine art (*technê*) against those who claimed that it was merely a matter of chance (*tuchê*). To confront the claim that the successes of medicine were due to *tuchê*, not *technê*, the doctor needed to do more than just point to successful results; he needed to be able to show that those results were actually due to medical treatment. Hence the doctor needed knowledge of causes (*aitiai*), knowledge that would enable him to explain and justify his practice and so to establish a direct causal connection between that practice and a successful outcome (or indeed to explain why he was not at fault in cases of failure).² The importance of the concept of *phusis* in the *technê-tuchê* debate stems from the close connection between the notions of nature and cause. With the concept of *phusis* was associated the notion of the regularity of nature, the idea that phenomena had natural causes that could at least in principle be discovered by human beings and that were not due to arbitrary divine intervention. This emerges especially clearly in *On the Sacred Disease* (*De morbo sacro*), which opens with an argument against the view that epilepsy is caused by divine intervention on the ground that the disease has both a “nature” (*phusis*) and a “cause” (*prophasis*).³ Knowledge of *phusis* brought with it the knowledge of causes, and hence the ability to explain and justify medical practice. This, then, is one reason why knowledge of *phusis* came to be considered an essential foundation of the medical *technê* by a wide range of medical authors, among them the author of *VM* and his opponents.

My second preliminary point concerns the place of chapter 20 in the author’s overall argument. *VM* opens with a vigorous attack on thinkers who “lay down as a *hypothesis* for their account” (ὑπόθεσιν αὐτοῖς ἐωυτοῖσιν ὑποθέμενοι τῷ λόγῳ, p. 118.2 Jouanna; 1.570 L.) one or more fundamental principles such as the hot, the cold, the wet,

² Cf. especially *On the Art* (*De arte*) 5 (pp. 228–230 Jouanna; 6.6–8 L.).

³ Cf. Lloyd (1979) 49–55 on the development of the notions of nature and cause in the Hippocratic authors.

and the dry, and go on to reduce the causes of all cases of disease and death to one or more of these factors. Up to the beginning of chapter 20, the argument is directed against the claim that one or more of these factors is the cause and cure of all diseases. The beginning of chapter 20 thus seems to mark a fresh start, as the author turns to the claim that medicine must be based on an account of the origin and development of the human being from its elementary constituents. He nowhere attributes such a theory to the opponents attacked in chapters 1–19, nor does he ever associate the term *hupothesis* or the principles hot, cold, wet, and dry with the opponents attacked in chapter 20. But though he does not make the connection explicit, it seems very likely that the author considers the positions attacked in chapters 1–19 and chapter 20 to be closely related and to result from what is essentially the same mistaken procedure: the attempt to draw on the tradition of the Presocratic “inquiry into nature” (*peri phuseôs historia*) to give medicine the theoretical foundation it needed to qualify as a genuine *technê*. By the “inquiry into nature” I refer to the project of what may be called cosmological speculation that began in sixth-century Miletus and whose most prominent representatives in the latter part of the fifth century were thinkers such as Empedocles, Anaxagoras, and Diogenes of Apollonia. These thinkers attempted to give an account of the origin and development of the universe and of human beings within it.⁴ The author makes a thinly veiled reference to this tradition in chapter 1 in remarking that the use of *hupotheseis* is necessary when discussing “things in the sky and under the earth” (οἶον περὶ τῶν μετεώρων ἢ τῶν ὑπὸ γῆν, p. 119.7 Jouanna; 1.572 L.), topics that were characteristic of Greek cosmological speculation. He refers more clearly to the tradition in section 20.2 in remarking that the opponents “tend towards philosophy like Empedocles or others who have written about nature from the beginning” and by using the term *historiê* to refer to the kind of knowledge that they consider an essential foundation for medicine. The distinction between the polemic of chapters 1–19 and chapter 20 is thus a matter of a difference of emphasis: in chapters 1–19 the focus is on that aspect of the oppo-

⁴ A crucial passage for understanding the scope and approach of the Presocratic inquiry into nature is Plato, *Phaedo* 96 c. Jouanna (1992) rightly stresses the importance of this passage for the interpretation of the more “philosophical” Hippocratic writings such as *On Fleashes* (*De carnibus*) and *On Regimen* (*De victu*).

nents' theorising that has the most direct implications for medicine, the reduction of the cause and cure of disease to a very small number of factors, while in chapter 20 the author steps back to discuss more generally the kind of *phusis* theory that underlies this position.

I now wish to examine more closely the kind of knowledge of human *phusis* that the author rejects here as irrelevant to medicine. In section 20.1 the phrase "how it [sc. the human being] originally came to be and from what things it was compounded" (ὅπως ἐγένετο πρῶτον καὶ ὅπόθεν συνεπάγη, p. 146.6–7 Jouanna; 1.620 L.) suggests an account of anthropogony, i.e. an attempt to explain how the first human beings arose from elementary constituents during the formation of the universe. Then in section 2 the author describes the knowledge on which his opponents propose to base medicine as the science (*historiê*) of "what the human being is and by what causes it comes to be and all the rest, with precision." Here the present tense formulation of the question as concerning how human beings *come* to be (*gignetai*) suggests an account of the formation and development of humans in the present day, i.e. embryology. What unites these two formulations is a concern with origin and development: the opponents take an account of "what the human being is" to be an account of what human beings arise from and how they develop, whether in the present day or at a point in the distant past. In associating *phusis* with the concepts of origin and growth, these thinkers remain close to the etymological meaning of the word, which is probably derived from the verb *phuomai* ("to grow").⁵

The author names Empedocles as a representative example of a thinker who engages in this kind of theorising about human *phusis*. Since the mention of an opponent by name is very rare in the Hippocratic writings, we should consider carefully why the author refers to Empedocles in particular here. The general characteristics of Empedocles' work place him squarely in the tradition of the Presocratic inquiry into nature. He attempts to give a complete account of the origin and development of the cosmos and of the place of human beings in it on the basis of a small number of principles: the four elementary substances earth, air, fire, and water, and two motive forces, Love and Strife. Two distinctive features of Empedocles' work

⁵ For the etymology, see Kahn (1960) 201 n. 2.

help to explain why the author mentions him here. First, he had a keen interest in anthropogony and embryology. Several fragments and testimonia deal with the original formation of human beings, and the doxographers report an attempt to explain the formation of human tissues from the four elements that probably had its original place in a description of the emergence of the first human beings (DK 31 A 78).⁶ In embryology, Empedocles treated such questions as menstruation (DK 31 A 80), sex differentiation and the resemblance of parents to children (DK 31 A 81), and the length of time it takes male and female embryos to develop (DK 31 A 83). His embryological accounts were closely linked to accounts of the first emergence of living things: according to DK 31 A 70 Empedocles held that trees were the first living things to emerge from the earth, and also drew an analogy between the way they were nourished by the heat in the earth and the way the embryo is nourished in the womb. Empedocles also takes a developmental approach to questions of physiology. The famous fragment in which he compares the eye to a lantern to elucidate its structure and function (DK 31 B 84) is in fact a description of the creation of the eye by Aphrodite, the personification of the cosmic force of Love.⁷ Secondly, while earlier thinkers may have identified particular substances such as air or fire as fundamental, Empedocles is the first thinker to develop a clear concept of an elemental constituent. The Empedoclean elements earth, air, fire, and water are unchanging and indestructible, and all change results from their combination and separation. This concept of an elemental constituent made Empedocles the obvious figure to illustrate the concern to give an account of “from what things the human being was compounded” (ὁπόθεν συνεπάγη). That Empedocles’ own term for element is “root” (*rhizōma*), however, indicates that for him the elements are embedded within a larger, developmental framework and are much more than just constituent substances. The four elements or “roots” (*rhizōmata*) are both the origin of all things and

⁶ For anthropogony see DK 31 B 62, and for the original emergence of other living things DK 31 B 60–61; cf. also DK 31 B 15. DK 31 A 72 (attributed to Aëtius) speaks of four stages in the coming to be (*genesis*) of animals and plants.

⁷ DK 31 B 84: “As when a man who intends to make a journey prepares a light for himself, a flame of fire blazing through a wintry night . . . thus *at that time* (ὥς δὲ τότε) was the primal fire concealed in the round pupil . . .” The reference is to the time when Aphrodite first fashioned the eye: DK are right to remark “bei der Bildung des Auges” in their translation.

that to which all things return when destroyed. Like the Homeric gods, each has its own privileges (*timai*), and they share dominance over the world in an endless process of cyclical variation.⁸

The general approach to the study of living things suggested by this evidence is brought out clearly by Aristotle in a passage of *On the Parts of Animals* (*De Partibus Animalium*):

For coming to be (*genesis*) is on account of substance (*ousia*), not substance on account of coming to be. Hence Empedocles was wrong to say that many things belong to animals because it happened in this way during their coming to be, for example that they have a backbone of such a kind because it happened that it was twisted and broken. (*PA* 640 a 18–22 = DK 31 B 97)

From Aristotle's point of view, Empedocles errs in trying to explain the fully developed organism by reference to the way it comes to be, rather than explaining the processes by which it comes to be from a consideration of the nature of the mature organism. We need not accept Aristotle's commitment to a teleological approach to the study of nature to appreciate the correctness of this observation about the character of Empedoclean explanations. Aristotle's remark makes quite clear that Empedocles' approach to the study of the nature of a living thing is to try to give an account of how it came to be the way it is.

In response to the opponents' attempt to base medicine on this sort of developmental theory of human *phusis*, the author of *VM* claims that medicine must be based on an understanding of human *phusis* that has nothing to do with origin or development. Instead of a theory of how human beings *came to be* from simpler constituents, medicine must be based on a theory of what human beings *are* in relation to their regimen: "what the human being is in relation to foods and drinks and other practices, and what will be the effect of each thing on each individual" (20.3). It would be quite wrong to interpret this passage as indicating a commitment to a doctrine of philosophical relativism, as some commentators have done. As we have seen, the author is no sceptic about the possibility of attaining knowledge of human *phusis*. His position is that medicine must be based on the kind of knowledge of human *phusis* that will enable the

⁸ For the elements as "roots" see DK 31 B 6.1; for their cyclical variation and equal "privileges" (*timai*) see DK 31 B 17.27–35. On the development of the doctrine of elements cf. Kahn (1960) 133–63.

doctor to relate human beings to their regimen in a systematic way.⁹ As far as he is concerned, all knowledge of the formation and development of the human being is simply irrelevant to this purpose. What the doctor needs to know is not how human beings developed out of a set of primary elements but how the various foods, drinks, and other components of human regimen will affect each individual. This knowledge must be both highly precise and explanatory. It is not enough for the doctor simply to know that cheese is harmful; he must know what trouble cheese causes, why it causes it, and which of the things in the body it affects (20.3). The conviction that medicine must be based on a body of precise, explanatory knowledge that is directly relevant to medical practice leads the author to set out a theory of human *phusis* that has two primary aspects: (1) knowledge of the interactions between the fluid substances or humours present in different individuals and different foods and drinks, and (2) knowledge of the capacities of the internal organs to affect and be affected by fluids and air in the body.

The need for the doctor to have knowledge of the humoral constitution of the body and of foods emerges clearly in sections 20.5–6. The different effects that cheese has on different human beings imply that these individuals differ in *phusis*, and this difference is understood as a difference in the relative amounts and strengths of the humours in their bodies. If cheese has an especially powerful effect on a person, it is because the humour (*chumos*) that is disturbed by cheese “happens to be present in greater quantity and to exert more power” in that person’s body (τυγχάνει πλείων ἐνεῶν καὶ μᾶλλον ἐνδυναστεύων ἐν τῷ σώματι, p. 147.19–20 Jouanna; 1.624 L.). The theory is set out in more detail in chapter 14, where the author presents it as the culmination of the discovery of medicine by a group of nameless investigators in the distant past:

14 3 For since they did not think that it was the dry or the wet or the hot or the cold or any other such thing that harmed human beings, or that human beings needed any of these things, but rather the strength of each thing, that which was too powerful for human nature (*phusis*), what the latter could not overcome—this they thought caused harm, and this they sought to remove. And the strongest of the sweet is the

⁹ Pohlenz (1918) 405 correctly calls this knowledge of *phusis* “eine unmittelbar für die Praxis verwendbare Physiologie, die über das Verhalten des menschlichen Organismus zu Nahrung usw. aufklären und danach Diät und Therapie regeln will.”

sweetest, of the bitter the bitterest, of the sour the sourest, and of each of all the constituents, the extreme degree. **4** For they saw that these things are also in human beings and that they harm them: for there is in the human being salty and bitter and sweet and sour and astringent and insipid and myriad other things having powers of all kinds (*pan-toias dunamias*), in quantity and strength. These when mixed and blended (*memignena kai kekrêmena*) with one another are neither manifest nor cause the human being pain; but when one of them is separated off and comes to be on its own, then it is both manifest and causes pain. (pp. 135.14–136.16 Jouanna; 1.602 L.)

According to this theory the body contains many different fluid substances or humours (*chumoi*), each of which is characterised by a particular flavor such as salty or bitter, and each of which has its own *dunamis*, a distinctive power or capacity to affect the body in a certain way.¹⁰ To explain health and disease, the theory appeals to the notion of *krêsis* or blending: when these fluids are well mixed and blended with one another, the person is healthy, but when one is separated and stands apart, it causes pain. As we have seen in discussing the cheese example of chapter 20, the theory is also meant to explain the effects of different foods on different healthy individuals: different *krêseis* in both foods and individuals are distinguished by the amounts and strengths of the various humours making them up. The remainder of chapter 14 makes clear that this theory is based on a close analogy between the composition of the human body and the composition of foods. Just as foods cause harm only when they possess a strong, unblended flavor or humour (*chumos*), so the humours in the body cause harm only when they are unblended (14.5–6). The claim that the same substances are present in the body and in foods is probably based on a view of nutrition as occurring by the assimilation of like to like; at any rate the closest parallels to the author's theory are found in accounts of plant nutrition that endorse this view.¹¹

¹⁰ Following Plamböck, I take the basic meaning of the term *dunamis* to be an abstract "capacity to affect", derived from the verb *dunamai* (1964, 64). In *VM* *dunamis* is sometimes used of a quality such as hot or cold; cf. *VM* 16.1 (p. 139.4–6 Jouanna, 1.606 L.). But it is important to recognise that this is because the author conceives of each quality as having a specific capacity to affect the body.

¹¹ Cf. *On Diseases (De morbis)* IV, 34.1 (pp. 85.25–86.1 Joly; 7.544 L.): "For the earth contains innumerable virtues (*dunameis*) of all kinds, for it provides every individual plant which grows in it with a humour (*iknas*) similar to that humour which each plant possesses congenitally and which is akin to that plant—so that each plant draws from the earth nutriment such as the plant itself is" (tr. Lonie 1981). The

The detailed interpretation of the author's theory of *krêsis* involves a number of complex and somewhat obscure issues that I cannot discuss here.¹² My concern is simply to draw attention to the sharp contrast between this theory and Empedoclean-style theories of human *phusis*, a contrast that involves both the scope of the theory and the method used to reach it. Like Empedocles and a number of Hippocratic writers, the author gives an account of substances in the human body whose behavior accounts for health and disease. But he never claims that these are the constituents of everything in the universe, like the Empedoclean elements. Nor does he even claim to be able to give a complete account of the substances in the body: he says only that "there is in the human being salty and bitter and sweet and sour and astringent and insipid and myriad other things" (*VM* 14.4, p. 136.10–11 Jouanna; 1.602 L.). No claim is made about the role of these substances in the formation and development of the human being, nor are they said to undergo variation with the seasons like the four humours in *On the Nature of Man* (*De natura hominis*), a text which is widely considered to show Empedoclean influence. There is also a clear contrast of method between Empedoclean-style theories of human *phusis*, which are based on general cosmological considerations, and a theory like *VM*'s, which begins from the observation of the reactions of different individuals to different foods. Thinkers like Empedocles treated the origin of the human being in the context of a general theory of the development of the cosmos as a whole. In contrast, the author of *VM* insists on the need to begin with the study of the capacities (*dunameis*) of different individuals to assimilate different foods. The observation of such differing reactions provides the only reliable basis for drawing conclusions about human *phusis*, as in the cheese example of chapter 20. Such observation (we may note) is also of fundamental importance in the account of the discovery of medicine that the author presents in chapters 3–8.

The second main aspect of the author's theory of human *phusis* involves knowledge of the internal organs of the body. In particular, the doctor must have detailed knowledge of the relationship between their shape, consistency, and/or texture and their capacity

author makes this statement to support his view that human nutrition occurs by the assimilation of like to like; cf. *Morb.* IV, 33.3 (p. 85.19–24 Joly; 7.544 L.).

¹² For full discussion see Schiefsky (2005).

to act on or be affected by fluids and air in the body. The following passage from near the beginning of chapter 22 illustrates the author's approach:

22 2 Now which structures would best be able to attract and draw moisture to themselves from the rest of the body: the hollow and extended, the solid and round, or the hollow and tapering? I think it is these, the ones that taper from wide and hollow to narrow. **3** But one must learn these things from evident things outside the body. For on the one hand, if you keep your mouth wide open you will not be able to draw up any liquid, but if you thrust your lips forward and contract and compress them, you will draw some up; and indeed, if you go on to place a tube upon them, you will easily draw up whatever you like. Again, cupping instruments that are applied to the skin and taper from wide to narrow have been crafted for the purpose of attracting and drawing fluid from the flesh; and there are many other examples of this kind. **4** Of the structures within the human being the following have such a nature (*phusis*) and shape: the bladder and the head, and the womb in women. These obviously attract most of all and are always filled with acquired moisture. (pp. 149.10–150.8 Jouanna; 1.626–628 L.)

The author begins by asking which shapes are such as to attract fluids. Based on experience with things external to the body, such as straws and cupping instruments, he concludes that things that are hollow and tapering are best able to do this. He then draws on his knowledge of the shape of the internal organs to infer that it is the bladder, the head, and the womb that are especially able to attract fluids. The author's concern here is not with anatomy, if we understand anatomy to refer solely to the structure or consistency of the internal organs, independent of their capacity to act on and be affected by the substances in the body. Throughout the chapter he displays familiarity with such features of the internal organs as their shape, texture, and consistency. The spleen, the lung, and the breasts he knows to be spongy and porous, and so he concludes that they are especially suited to absorb moisture (*VM* 22.6, p. 150.13–17 Jouanna; 1.628 L.). The liver is broad and resistant but also tender, swollen, bloody, and close in texture, so that it suffers sharp and frequent pains from the effects of wind in the body (*VM* 22.8, p. 152.1–13 Jouanna; 1.632–634 L.). The diaphragm is broad and resistant but also more sinewy and stronger than the liver; hence it suffers less pain (*VM* 22.9, p. 152.13–17 Jouanna; 1.634 L.). In sum, knowledge of the shape and consistency of the internal organs is

presupposed; what the doctor needs in addition is knowledge of how they will act on and be affected by the substances in the body. This knowledge is to be gained by drawing analogies with everyday experience (the use of a straw to draw up liquids) and experience in medicine (the use of cupping instruments to draw fluids from the body).

Once again we may distinguish the author's theorising about the internal organs from Empedoclean-style accounts in terms of both scope and method. His discussion of the internal organs makes no mention of their formation; the entire discussion is concerned with their behavior in the mature human being. Moreover it is restricted to a study of the interactions between the organs and the substances in the body; the author does not discuss topics such as the operation of the sense organs, an understanding of which is apparently considered an essential part of medicine by some medical authors.¹³ As for method, it has often been noted that the author's recommendation to use analogies with familiar processes to suggest hypotheses about matters that cannot be directly observed is similar to Empedocles' use of analogy to elucidate the working of the eye or the process of respiration (DK 31 B 84, B 100). But two features at least distinguish the author's use of the analogical method from Empedocles'. First, the author uses analogy to gain knowledge about matters concerning which he already knows a great deal. He already has a substantial amount of knowledge about the internal organs; he uses analogy to learn about how they behave in the body. Secondly, the hypotheses that he formulates using analogy are confirmed by his medical experience and serve to explain that experience. Thus he concludes section 22.4, quoted above, by stating a fact of medical experience which confirms the hypothesis that he formulated on the basis of analogy: the bladder, head, and womb are known to attract fluids most of all and to be filled with liquid drawn in from elsewhere. This carefully controlled appeal to analogy to extend medical knowledge and to explain facts of medical experience stands apart from Empedocles' use of analogy to elucidate obscure physiological processes that arguably have no relevance to the practice of medicine.

Reduced to its bare essentials, the methodological contrast between the author and his opponents is a contrast between the attempt to

¹³ A prime example is *Cam.*; cf. Jouanna (1992).

explain the fully-formed human being in terms of its development from simpler constituents, and a theory that takes the mature human being as its starting point and investigates the effects that different foods have on it. When the author claims that the only way to attain a developmental account of human *phusis* is by first attaining a complete grasp of medicine, he is claiming that the entire approach of attempting to explain the fully formed living thing by giving an account of its development from simpler constituents is mistaken. The way to proceed is not to try to understand the nature of the mature human being from its development, but to try to infer the process of development from the study of the mature human being. In this respect, the author's stance towards Empedocles and his followers is similar to that of Aristotle, who insists that the study of fully-grown organisms must precede any investigation of their origin and development.¹⁴

Finally we may return to the author's remarkable statement in section 20.2 that the developmental knowledge of human *phusis* which his opponents claim to have can be attained, but only if one has mastered all of medicine. The author evidently thinks that a complete mastery of medicine will enable the doctor to draw reliable conclusions about the formation and development of the human being. Medical experience, in other words, is the only reliable foundation for developing accounts of embryology or anthropogony. The author presumably understands the complete mastery of medicine to involve a thorough understanding of the effects of all aspects of regimen on individuals with different humoral constitutions, as well as a full account of the internal organs and their behavior. It might also involve the systematic study of the behavior of the humours outside the body (cf. *VM* 24, p. 153.7–19 Jouanna; 1.634–636 L.). To derive an account of human origins and development from a complete mastery of medicine as the author understands it would require drawing conclusions about the past state of the human being from its present state and behavior. This would presumably involve

¹⁴ Cf. *PA* 640 a 18–22 (quoted above, p. 77). In saying this I do not mean to suggest that the *reasons* that led Aristotle to this criticism were the same as those that led *VM* to his view. What motivates Aristotle to criticise Empedocles' approach to the study of living things is a commitment to teleological explanation; *VM* is concerned instead to stress the speculative character of Empedocles' approach and its irrelevance to medicine.

the use of the analogical method, given the impossibility of investigating such questions through direct observation. It is important to note that the author has no objection to using analogy to draw conclusions about the past from the present; such reasoning in fact underlies the account of the discovery of medicine that he presents in chapters 3–8.¹⁵ In a similar fashion, he might have thought it possible to draw on a complete knowledge of the behavior of the fluid substances now present in the body and the internal organs to reach reliable conclusions about the way in which those substances and organs were originally formed.

I shall close on a somewhat more speculative note. Since the author is attacking opponents who give an account of human origins and development in a cosmological context, it is possible that he thought that a complete account of human origins and development, appropriately derived from the study of medicine, would have implications for cosmology as well. If one could somehow develop a satisfactory account of the substances from which the human being originated, that might allow conclusions to be drawn about which substances played the major role in the original formation of the cosmos. We might thus imagine that the author envisioned the formulation of a general anthropogony and cosmology as the culmination of the study of medicine. This is a rather tantalising possibility, but it seems to me unlikely to be correct in light of the author's emphatic statement in chapter 1 that no clear knowledge is possible concerning "things in the sky and under the earth":

1 3 For this reason I have deemed that medicine has no need of a newfangled hypothesis like things obscure and dubious, concerning which it is necessary to make use of a hypothesis if one undertakes to say anything; for example, concerning the things in the sky or under the earth. If anyone should recognise and state how these things are, it would be clear neither to the speaker himself nor to his listeners whether what he says is true or not, for there is nothing to which one could refer to attain clear knowledge. (p. 119.4–11 Jouanna; 1.572 L.)

This passage, I suggest, expresses a cautious ideal of empirical verifiability: theories about invisible things can be confirmed if there is some way to assess them on the basis of human experience. But while the author evidently thinks that inferences to the internal state

¹⁵ Cf. Jouanna (1999) 239 on the author's use of analogy as a method for reconstructing the past.

of the humours in the body or the behavior of the organs fall within the realm of such empirical verifiability, it is hard to see how any inference about “things in the sky and under the earth” ever could. No matter how rich a base of experience we may accumulate, these topics are simply so far removed from human experience that we cannot hope to gain clear knowledge of them.

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ART, SCIENCE AND CONJECTURE, FROM HIPPOCRATES TO PLATO AND ARISTOTLE*

Véronique Boudon-Millot

Summary

This paper attempts to study the notion of stochazesthai in the Hippocratic Corpus in relation to Hippocratic reflections on the status of the medical art. Considering the passages where the verb stochazesthai is employed, we can see that this word is not yet synonymous with the term “conjecture”. The main point of interest are the relations between the Hippocratic writings and the relevant works of Plato and Aristotle. In revising the concept of stochazesthai in this way, it appears that this “conjectural” mode of knowledge was unknown to the Hippocratic writers and that it is really too early in their case to speak of “stochastic medicine”.

The verb στοχάζεσθαι can be found almost 200 times in the entire Galenic corpus, without counting its derivatives (στοχασμός, στοχαστικός). Galen in particular presents the στοχαστική τέχνη—the “stochastic art” or, to be clearer, the “art of conjecture”—as an alternative that whilst certainly not being fully satisfactory, is nevertheless methodologically indispensable for thinking about the complex relationship between τέχνη and ἐπιστήμη. Any serious reflection on the Galenic στοχαστική τέχνη must, however, be accompanied by an investigation of the greatest possible accuracy into the question whether the notion was already present in the Hippocratic Corpus. Now, even if a combined consultation of the *TLG* and of the *Index Hippocraticus* confirms that the verb στοχάζεσθαι does appear in the Hippocratic Corpus, where it is used six times¹ (to which one needs to add two

* English translation by Christine F. Salazar.

¹ Στοχάσασθαι can be found once in *On Ancient Medicine* (*De vetere medicina*) 9.3 (p. 128,11 Jouanna; 1.588 L.); στοχάζεσθαι twice in *On the Eight-month Foetus* (*De octimestri partu*) 9.4 (p. 80,5 Grensemann; p. 171,20 Joly; 7.448 L.) and in *On the Physician* (*De medico*) 7 (9.214 L.); στοχαζόμενον once in *In the Surgery* (*De officina medici*) 4 (p. 62,14–15 Withington; 3.288 L.); στοχασάμενον once in *On Joints* (*De articulis*) 4 (p. 206,15–16 Withington; 4.84 L.), and finally στοχαζόμεθα in the *Letter* (*Epistula*)

derived forms), this still does not allow us to claim that the notion of conjecture, in the Galenic and modern sense of the word, is already present there. This, however, is exactly the conclusion arrived at by Heinz Gerd Ingenkamp in a paper presented at the IVth International Hippocratic Colloquium at Lausanne in 1981. Taking as his starting-point the passage in *On Ancient Medicine* that uses the verb *στοχάσασθαι*, Ingenkamp does not hesitate, in his conclusion, to speak of “stochastische Medizin” regarding this Hippocratic treatise.² However, detailed examination of all the uses of *στοχάζεσθαι*, without limiting it to the occurrence in *On Ancient Medicine*, does not appear to allow this kind of generalizing. Even if the notion of conjecture as it was to be popularized and systematized by Galen does not appear radically alien to the Hippocratic Corpus, it is at the very best only outlined, as we shall attempt to see in a moment.

ΣΤΟΧΑΖΕΣΘΑΙ AS AN EXPRESSION REFERRING TO THE BASIC IDEA OF
TARGET TO BE HIT, “TO AIM AT” (RARE USAGE)

The verb *στοχάζεσθαι*, formed from *στόχος* (aim, target),³ is unsurprisingly found in the Hippocratic Corpus in the sense of “to aim”, “to shoot at”, the primary meaning given also by the Liddell-Scott-Jones dictionary. This is certainly also the meaning of *στοχάζεσθαι* in *On the Eight-month Foetus*, where it is stated explicitly that the doctor has to keep an eye (*σκοπεῖν*) on all the odd days if he wants to *aim* correctly at the patients’ recovery (*σκοπεῖν γὰρ χρή τὸν μέλλοντα ἱητρὸν ὀρθῶς στοχάζεσθαι τῆς τῶν καμνόντων σωτηρίας*).⁴ The image used here is definitely that of the target to be hit (*στόχος*) by a sufficiently keen-sighted doctor so as to compete in accuracy with

16 (p. 72,14 Smith; 9.346 L.). One can also find two derived forms: *εὐστόχος* in *Nutrimēt (De alimento)* 35 (p. 145,4 Joly; 9.110 L.), and *εὐστόχοι* in *Decorum (De habitu decenti)* 3 (9.228 L.).

² Ingenkamp (1983) 257–262.

³ DELG, *s.v.* *στόχος*.

⁴ Hp., *Oct.* 9.4 (p. 80,4 Grensemann; p. 171,20 Joly; 7.448 L.): *Σκοπεῖν γὰρ χρή τὸν μέλλοντα ἱητρὸν ὀρθῶς στοχάζεσθαι τῆς τῶν καμνόντων σωτηρίας, θεωροῦντα μὲν περίττας πάσας, τῶν δὲ ἄρτίων τὴν τεσσαρεσκαίδεκάτην καὶ τὴν ὀγδόην εἰκοστήν καὶ τεσσαρακοστήν καὶ δευτέρην.* (“The doctor who wants to aim correctly for the deliverance of the sick, must observe all the odd days, and of the even ones the fourteenth, the twenty-eighth and the forty-second.”)

the best-trained archers.⁵ Now, to spin out the metaphor, in order to hit the target, it is better to aim for the centre, to aim accurately and, in the doctor's case, to aim for a just measure.

Στοχάζεσθαι USED TO EXPRESS THE IDEA OF ACHIEVING A RIGHT
MEASURE IN THE SEARCH FOR AN ADAPTATION TO (ἐς, πρὸς) AN
INDIVIDUAL CASE

The idea of a just measure adapted to each individual in turn presupposes the quest for the adaptation to each encountered individual case. This adaptation is mostly expressed with the prepositions ἐς or πρὸς. Although this individual dimension of στοχάζεσθαι is not always explicitly stated, it is nevertheless indisputably present. This is the case, e.g. in the passage in *On Joints* 4 dedicated to one of the three manoeuvres to be executed for the reduction of dislocation of the humerus. Having demonstrated a first type of manipulation that can be carried out either with just the fingers (and can therefore be executed equally well by the patient himself or by the doctor) or by using the heel, now the Hippocratic author describes the manoeuvre that consists in the doctor inserting the point of his own shoulder into the patient's armpit: "There is another reduction, in which one inserts the shoulder underneath standing up; however, he who practices this must be taller [than the patient]: taking hold of the [patient's] arm, [he must] insert the top of his own shoulder underneath the [patient's] armpit. Then [he must] twist it into place, so that it is lodged, *with the aim of* suspending the person, by his armpit, over his own shoulder."⁶ By dwelling on the difficulty of reductions that vary from case to case and from one individual to the other, the context adds the idea of an individual dimension that makes each manoeuvre efficacious, thus using στοχάζεσθαι here in

⁵ This first meaning of στοχάζεσθαι can also be seen in the passage in *In the Surgery* (*De officina medici*) 4 (p. 62,14 Withington; 3.288 L.), where the author recommends being able to use both hands, "having the aim to [work] speedily, painlessly, gracefully, resourcefully". (στοχαζόμενον, ἀγαθῶς, καλῶς, ταχέως, ἀπόνως, εὐρύθμως, εὐπόρως), that is, again, aiming (for usefulness and convenience).

⁶ *Hr., Art.* 4 (p. 206, 11 Withington; 4.84 L.): "Ἔστι δὲ καὶ ἄλλη ἐμβολὴ ἣ κατωμίζουσιν ἐς ὀρθόν· μείζω μέντοι εἶναι χρή τὸν κατωμίζοντα, διαλαβόντα δὲ τὴν χεῖρα, ὑποθεῖναι τὸν ὦμον τὸν ἑαυτοῦ ὑπὸ τὴν μασχάλην ὅξύν· κάπειτα ὑποστρέψαι, ὥς ἂν ἐνίξηται ἔδρη, οὕτω στοχασάμενον ὅκως ἀμφὶ τὸν ὦμον τὸν ἑαυτοῦ κρεμάσαι τὸν ἄνθρωπον κατὰ τὴν μασχάλην.

the unequivocal sense of “aiming for” or “with the objective”. In fact, the ease or difficulty of reductions appears to be extremely variable according to the case and the individual. In order to achieve his goal, or not to miss his target, the doctor absolutely needs to take into account the individual’s uniqueness: “Therefore one needs to know the most powerful [means] for each [case] in the entire art; and to make use of those that one considers [right] for each case.”⁷ In the same way, in a passage about the placing of cupping-vessels, the author of *On the Physician*—admittedly a treatise of a late date⁸—suggests “adjusting” (στοχάζεσθαι) the size of the cup to the part of the body where one needs to apply it: Μέγεθος δὲ σικύης τί χρήσιμον στοχάζεσθαι χρὴ πρὸς τὰ μέρη τοῦ σώματος, οἷς ἂν δέη προσβάλλειν.⁹

Finally, the author of *Nutriments* simply states, regarding the adaptation of the quantity of foods with respect to their nutritive faculty (the quantity and qualities themselves being variable according to the needs of each individual), that “It is a big [feat] to adjust adroitly—i.e. well targeted—the quantity to the faculty.”¹⁰

THE PLACE OF στοχάζεσθαι WITHIN MEDICINE CONSIDERED AS AN ART

However, the need for adapting to each individual case can sometimes take the doctor to the limits of his art and confront him with the unknown. In that sense στοχάζεσθαι takes place at the fluid borders between art, ignorance and knowledge.

This is the case in *Epistle* 16, from Hippocrates to Crateuas, asking him to provide Hippocrates with plants in case he needed them to purge Democritus in order to cure his madness. For the writer of the letter this is an occasion, while stressing the difficulty of discerning that which is hidden, to bring to mind the weaknesses of an art that is necessarily restricted by the limits of human knowledge: “In a way, we are engaged with two [problems], one concerning the patient and the other the art, of which the former is

⁷ Hp., *Art.* 71 (p. 368,23 Withington; 4.292 L.): διὰ τοῦτο ἐπίστασθαι μὲν χρὴ τὰ κράτιστα περὶ ἐκάστου ἐν πάσῃ τῇ τέχνῃ· χρεέσθαι δέ, οἷσιν ἂν δόξῃ ἐκάστοτε).

⁸ From the Hellenistic period or the beginning of the Christian era.

⁹ Hp., *On the Physician* (*De medico*) 7 (9.214 L.).

¹⁰ Hp., *Nutriments* (*De alimento*) 35 (p. 145,4 Joly; 9.110 L.): Μέγα τὸ ποσὸν εὐστόχως ἐς δυνάμιν συναρμολογεῖν.

not evident, and knowledge of the latter is limited. In both cases, there is also a need for luck.”¹¹ And the author of the letter immediately illustrates this verdict by an example also taken from purges: establishing what is “unforeseeable in purging” (τὸ γὰρ ἀτέκμαρτον ἐν τῇσιν καθάρσεσι), the Hippocratic author takes prudent steps, limiting himself to surmising the damage to the stomach and adjusting the proportion of the remedy to an unknown nature (καὶ ξυμμετρίην φαρμακείης πρὸς ἀγνουμένην φύσιν στοχαζόμεθα), since the nature of all things is neither the same nor one and the same (οὐ γὰρ ἡ αὐτὴ καὶ μία φύσις ἀπάντων).¹² In this context, in which the individual dimension of every remedy is still prevalent, we also find the notion of ignorance, that is, the ignorance of the nature peculiar to each individual, with which the doctor has to deal in composing his remedies. However, although this letter is of a later date, of an era in which the meaning of στοχαζέσθαι had already begun to evolve, I shall take care not to follow Littré here in translating the passage by the phrase “adjusting by conjecture (*ajustant par conjecture*)”. In this matter, I would rather side with W.D. Smith, who translates “we aim at equating the pharmaceutical effect with the unknown nature”. It should be added, though, that the notion of conjecture, in a sense that comes reasonably close to the modern use of that term, is far from absent from the Hippocratic Corpus. However, curiously, it is expressed not by the verb στοχαζέσθαι, but by a completely different verb, τεκμαίρεσθαι, which we have encountered in this passage in the derived form ἀτέκμαρτον (that which is impossible to foresee or to conjecture).

At any rate, one should not search in a hypothetical and apocryphal letter for the Hippocratic author’s reflection on his art and on the possible place left to conjecture, but rather in a treatise which I have deliberately saved for last, because it is the basis of Ingenkamp’s reflection on the Hippocratic medicine that he defines as “stochastic”: *On Ancient Medicine*. Let us recapitulate briefly the outlines of

¹¹ Hp., *Epist.* 16 (p. 72,9 Smith; 9.346 L.): Καὶ σχεδὸν πρὸς δύο στρατευόμεθα, τὸ μὲν ἀνθρώπου, τὸ δὲ τέχνης, ὃν τὸ μὲν ἄδηλον, τὸ δὲ τῆς ἐπιστήμης ὥρισται. Δεῖ δὲ ἐν ἀμφοτέροισι τούτοις καὶ τύχης.

¹² Hp., *Epist.* 16 (p. 72,14 Smith; 9.346 L.). Note that this is the only passage in the Hippocratic Corpus where Littré has ventured to translate στοχαζέσθαι by “conjecture”: “constatant ce qu’il y a d’impossible à prévoir dans les purgations, l’auteur hippocratique y pourvoit par la prudence, se contentant de soupçonner le mal fait à l’estomac, et ajustant par *conjecture* la proportion du remède à une nature inconnue”.

the famous methodological debate with which the treatise opens. Having condemned those who have tried to discuss medicine (περὶ ἰατρικῆς) by reducing everything to a single hypothesis—such as that of cold, dry, hot or wet—the author of the treatise asserts the supremacy of an art that derives its most absolute degree of legitimacy from the simple and incontestable fact that it exists. In other words, medicine is defined as a given, about which one has to agree. This art of medicine in the true sense of the word (αὐτὴ ἡ τέχνη πᾶσα ἡ ἰατρικὴ)¹³ can even be discovered just by following the right methods, based on the observation of the regimen appropriate in every case. The Hippocratic author is nevertheless very conscious of the fact that it is difficult to estimate the individual amount of food to be given to each. However, the doctor's task requires accuracy. Faced with this aporia, what the doctor is recommended to do is, again, to aim right and to achieve a measure: Δεῖ γὰρ μέτρου τινὸς στοχάσασθαι.¹⁴ Here again, we find a use of στοχάσασθαι encountered earlier on, in the sense of “to aim for a certain measure”, in the hope of achieving “the right measure” and guided by the search for the adaptation to an individual case.¹⁵

What is new here, i.e. the recourse to στοχάσασθαι, closely linked with the singular character of each individual's nature, is also part of a problematic relationship with chance on the one hand and accuracy on the other. The matter at stake here is as follows: how does one put a check on chance so as to respond in the most accurate way possible to the multiplicity of individual requirements? For the Hippocratic author, the answer is mercilessly straightforward. The requirement of an unattainable perfection introduces a fault into the system, destabilizing the pretensions that medicine had of rising to the infallible status of art and knowledge.¹⁶ Seen from that perspec-

¹³ Hp., *Vet. med.* 8.3 (p. 127,13 Jouanna; 1.588 L.).

¹⁴ Hp., *Vet. med.* 9.3 (p. 128,10 Jouanna; 1.588 L.).

¹⁵ In this matter I follow the interpretation of J. Jouanna who, in his edition of this treatise, translates by “aiming” (*viser*) and recommends avoiding the term “conjecture”, which presupposes an opposition between art and stochastics not yet present at this stage. On the notion of measure, and in particular regarding *On Ancient Medicine* and the adaptation of the quality and quantity of foods to the needs of each individual, see Bratescu (1983), 137–44.

¹⁶ The Hippocratic author is well aware that medicine is not generally considered an art, and he even acknowledges that this is not without reason: Εἰ δὲ μὴ τέχνη αὕτη νομίζεται εἶναι, οὐκ ἀπεικός (*Vet. med.* 4.1 = p. 123, 9–10 Jouanna;

tive, στοχάσασθαι is, after all, a way of getting close to the greatest possible accuracy, and therefore of escaping chance (τύχη), in the service of the art (τέχνη).

From this point of view, ch. 12 of *On Ancient Medicine*, which combines the various components of the Hippocratic doctor's thought on his art, is particularly enlightening—even if the verb στοχάσασθαι (found earlier on, in ch. 9) does not feature here. Being forced to adapt the regimen to the varying individual constitutions, the doctor is indeed faced with the need for extreme accuracy. The Hippocratic author admits, however, that “it is difficult, when such accuracy is required of the art, always to achieve the greatest precision. Many aspects of medicine, though (of which later), come to such a degree of accuracy”.¹⁷ Of course, in other cases one must be content, even if unable to achieve “accuracy concerning all aspects” (περὶ πάντα ἀκρίβειαν), then at least “to get close to the greatest accuracy” (τὸ ἐγγὺς τοῦ ἀτρεκεστάτου). What better means could there be available to the doctor than reasoning (λογισμῶ)?¹⁸ It allows him to emerge from great ignorance (ἐκ πολλῆς ἀγνωσίης), admiring “the discoveries made by a good and correct method, and not under the influence of chance”. Now, the conditions in which this reasoning unfolds are exactly those required for the exercise of στοχάσασθαι in ch. 9: striving for the adaptation to a given individual case, the need for accuracy and the refutation of both ignorance and chance. However, the verb does not feature there, so prudence recommends avoiding a rash equating of λογισμός and στοχάσασθαι.

Thus, while the context of *On Ancient Medicine* combines all the ingredients of a fruitful reflection on the status of the medical art, its stochastic dimension, although strongly suggested, is nevertheless nowhere fully articulated as such. In particular, faced with his ignorance

1.578 L.). The reason being that in a field where, of necessity, no-one is a lay person, but all are versed (ἀλλὰ πάντες ἐπιστήμονες; *ibid.* = p. 123,10–11 Jouanna; 1.578 L.), no-one deserves to be called “expert in the art” (τεχνίτην). Medicine, considered as an art for the first time, is one with regards to the concept of knowledge (ἐπιστήμη).

¹⁷ Hp., *Vet. med.* 12.2 (p. 132,15–18 Jouanna; 1.596 L.): Χαλεπὸν δὲ τοιαύτης ἀκριβείης εὐόσης περὶ τὴν τέχνην τυγχάνειν αἰεὶ τοῦ ἀτρεκεστάτου. Πολλὰ δὲ εἶδεα κατ’ ἱητρικὴν ἐς τοσαύτην ἀκρίβειαν ἤκει, περὶ ὧν εἰρήσεται.

¹⁸ In his edition (p. 133, n. 2), J. Jouanna emphasizes that this is the first occurrence of the term λογισμός, rightly stressing the part played by reasoning in the construction of medical knowledge.

of the individual differences of each patient, the Hippocratic doctor has no other recourse for achieving the greatest accuracy and the just measure than reasoning. Although his aim may well be the attainment of a just measure (μέτρον τινὸς στοχάσασθαι), λογισμός remains the only means to achieve it. And it is in this sense, because of the neat differentiation of goals and means, that Hippocratic medicine cannot yet be called stochastic in the sense in which Galenic medicine is. Galen would make στοχασμός a conceptual tool in its own right, along with reasoning and experience (λογισμός καὶ πείρα) and make it an art in itself (ἡ στοχαστική τέχνη), capable of taking over from the traditional tools of reasoning when these are foiled. There is not yet any such thing in the author of *On Ancient Medicine*, and therefore he cannot be credited with having “invented” stochastic medicine.

Nevertheless, by emphasizing the irreducible uniqueness of the medical art, faced with both a legitimate requirement of accuracy and the need for taking individuality into account, the Hippocratic author has blazed a trail for an idea that is echoed in Plato and Aristotle, before taking pride of place in the Galenic corpus.

ART, IGNORANCE AND CONJECTURE IN PLATO

As we have seen above, the only occurrence in which Littré has ventured to translate στοχάζεσθαι by “conjecture”, in *Epistle 16*, could be justified by the context of ignorance in which the doctor finds himself in providing purgatives. Now it is exactly when reasoned knowledge is lacking that Plato, in the course of a reflection on the status of the various arts, introduces the notion of στοχάζεσθαι in the *Gorgias* (464c f.). This is the famous passage dealing with the Socratic theory of flattery. According to Socrates, flattery has four subdivisions which pass for arts but are not, such as cooking, which is a matter of practice and routine (ἐμπειρία καὶ τριβή), rhetoric, cosmetics and sophistry. Cooking counterfeits medicine, as the art of cosmetics does with gymnastics, sophistry with legislation and rhetoric with justice. Flattery had noticed that the four true arts were established with a view to the greatest good, be it of the body or of the soul, and thus it divided itself so as to slip each of its parts under the corresponding art. In doing so, according to Plato, it was act-

ing not by reasoned knowledge (of which it is incapable), “but by conjecture” (οὐ γνοῦσα λέγω ἀλλὰ στοχασαμένη).¹⁹

If—in Hippocrates as well as in Plato—the recourse to στοχάζεσθαι takes place in contexts where the art’s resources fail when faced with ignorance, in the *Gorgias* this form of conjecture brings with it also the downfall of the art that is condemned to be nothing more than a pretext.²⁰ In other words, for Plato conjecture excludes art; it is incompatible with true art.

The specific case of medicine, as one of several arts, is dealt with in the *Philebus* in a radical fashion. In Plato’s view, as a matter of fact, the arts differ according to their greater or lesser degree of accuracy and according to whether they make greater or lesser use of the art of counting, weighing and measuring. Thus, to Socrates or Plato, an art that in its daily practice does without those resources has no great value. For in such a case, that is, if one does without the resources of numbers, weights and measures, “our only resource after this [exclusion] would be to infer from conjecture, and to exercise the senses by experience and some routine, and to avail ourselves of the powers of stochastics, which many call the arts”.²¹ This is the case, in particular, with the art of flute-playing, which creates harmony not by measure but by conjecture (τὸ σύμφωνον ἀρμόττουσα οὐ μέτρῳ ἀλλὰ μελέτης στοχασμῷ), and in general with all music, which “pursues the measure of each vibrating chord through conjecture (τὸ μέτρον ἐκάστης χορδῆς τῷ στοχάζεσθαι φερομένης θηρεύουσα), so that it contains much inaccuracy and little certainty (ὥστε πολὺ μεμειγμένον ἔχειν τὸ μὴ σαφές, σμικρὸν δὲ τὸ βέβαιον)”. However, this is also the case with medicine, agriculture and with the skills of pilots and generals. Ingenkamp takes the presence of the verb

¹⁹ Plato, *Gorgias* 464c: Τετάρων δὴ τούτων οὐσῶν, καὶ αἰεὶ πρὸς τὸ βέλτιστον θεραπευουσῶν τῶν μὲν τὸ σῶμα, τῶν δὲ τὴν ψυχὴν, ἡ κολακευτικὴ αἰσθομένη, οὐ γνοῦσα λέγω, ἀλλὰ στοχασαμένη, τέτραχα ἑαυτὴν διανείμασα, ὑποδοῦσα ὑπὸ ἑκαστον τῶν μορίων, προσποιεῖται εἶναι τοῦτο ὅπερ ὑπέδω.

²⁰ Plato is very clear on this matter in the *Gorgias* (465a) when he concludes: “Now I call this flattery, and I state that such a thing is shameful. . . .; and I say that it is not an art but a matter of routine. . . .” (Κολακείαν μὲν οὖν αὐτὸ καλῶ, καὶ αἰσχρὸν φημι εἶναι τὸ τοιοῦτον τέχνην δὲ αὐτὴν οὐ φημι εἶναι ἀλλ’ ἐμπερίαν).

²¹ Plato, *Philebus* 55e: Τὸ γοῦν μετὰ ταῦτ’ εἰκάζειν λείποιτ’ ἂν καὶ τὰς αἰσθήσεις καταμελετᾶν ἐμπερίᾳ καὶ τινι τριβῇ, ταῖς τῆς στοχαστικῆς προσχρωμένους δυνάμεσιν ὡς πολλοὶ τέχνας ἐπονομάζουσι.

στοχάζεσθαι in both the *Philebus* and *On Ancient Medicine* as justification for concluding that there is an exact parallel between the status of music and that of Hippocratic medicine. However, it seems to me on the contrary that Plato's conclusion on the status of stochastics in the *Philebus* (56c) is diagonally opposed to the text of *On Ancient Medicine* as far as the preoccupation with the μέτρον, the right measure, is concerned. In fact, Plato differs radically from the Hippocratic author when it comes to the means to be employed to achieve this. While the author of *On Ancient Medicine* stresses the importance of στοχάζεσθαι in order to attain the μέτρον, the exact individual measure, Plato sees the exclusive use of accurate instruments of measurement—such as the rule, the compass, the carpenter's rule or the line—as the only means of achieving precision. Moreover, his conclusion is definitive: “Let us therefore divide that which is called the arts into two classes: those that bear resemblance to music and have less precision in their works, and the others, which are similar to architecture and are more accurate”. While the Hippocratic author praises the doctor who is able “to attain knowledge sufficiently accurate for making only small mistakes”,²² for Plato the recourse to conjecture is only a last resort. Where the author of *On Ancient Medicine* appears to allow the possibility, however exceptional, of perfect accuracy (τὸ δὲ ἀτρεκὲς ὀλιγάκις ἔστι κατιδεῖν), Plato on the other hand relegates conjecture to the ranks of experience and routine. In this sense, the Platonic concept of conjecture appears to be resolutely negative, going as far as denying medicine the status of an art in its own right.²³

FROM THE RIGHT MEASURE TO THE DUE MEAN

It is certainly Aristotle's merit to have contributed to the rehabilitation of στοχάζεσθαι by operating a subtle shift from right measure (τὸ μέτρον) to the right mean (τὸ μέσον). Indeed, while in the Hippocratic Corpus the recourse to στοχάζεσθαι appears intrinsically linked with the search for the right measure (τὸ μέτρον), now, in the

²² Hp. *Vet. med.* 9.4 (p. 128,15 Jouanna; 1.590 L.).

²³ “For example, if one separates all the arts from that of counting, measuring and weighing, one can say that what remains of each of them will not have great value” (Plato, *Philebus* 55e).

Nicomachean Ethics (1106a–b), it appears to be indissociable from the right mean (τὸ μέσον). In considering the nature of virtue (ἀρετή), Aristotle is led to discard all excess and all deficiency concerning human passions and actions, and to propose “a due mean”. He defines this mean as the point at equal distance from excess and default, even though this does not constitute a precise arithmetical proportion. Aristotle moreover emphasizes this point: “If we assume that ten is many and two is few, six is the middle in relation to the thing, for it is superior and inferior to the same amount [i.e. four].” However, Aristotle adds, “the mean in relation to us is not to be taken like this”. And in order to clarify his point, the Stagirite uses a comparison borrowed from medical practice: “for, if [for one man] eating ten *mnai* [of food] is [too] much and [eating] two is [too] little, the trainer will not prescribe six *mnai* [to all]; for this may be [too] much or [too] little for the one who eats it”.²⁴ And in Aristotle’s view, it is precisely this search for the right mean that is the basis of the superiority of the arts, because it is thanks to this prudent moderation that “every science fulfils perfectly its own objective, never losing sight of the mean (τὸ μέσον), and directing its works towards it”. The best way to achieve this, in Aristotle’s opinion, just as earlier on in Hippocrates’, is to “aim” at this right mean: “If virtue is more accurate and better than all art, as nature is, it would be aiming for the mean”.²⁵ Or in other words, “virtue is a kind of mean (μεσότης), since the mean is the goal at which it aims (στοχαστική γε οὔσα τοῦ μέσου).²⁶

In this sense, Aristotle’s thought seems much closer to that of *On Ancient Medicine* than to the *Philebus*. The context in which the activity of στοχάζεσθαι takes place is indeed precisely comparable with that of the Hippocratic treatise: it is the preoccupation with the greatest possible accuracy with respect to the individual standard. However, the conclusions about the status of the art that Aristotle draws from this are diagonally opposed to Plato’s. Far from denying

²⁴ Aristotle, *Nicomachean Ethics* 1106 a 33 ff.: Οἷον εἰ τὰ δέκα πολλά τὰ δὲ δύο ὀλίγα, τὰ ἕξ μέσα λαμβάνουσι κατὰ τὸ πρᾶγμα· ἴσῳ γὰρ ὑπερέχει τε καὶ ὑπερέχεται· τοῦτο δὲ μέσον ἐστὶ κατὰ τὴν ἀριθμητικὴν ἀναλογίαν· τὸ δὲ πρὸς ἡμᾶς οὐχ οὕτω ληπτέον· οὐ γὰρ εἴ τῳ δέκα μναὶ φαγεῖν πολὺ δύο δὲ ὀλίγον, ὁ ἀλείπτῃς ἕξ μνάς προστάξει· ἔστι γὰρ ἴσως καὶ τοῦτο πολὺ τῷ ληψομένῳ ἢ ὀλίγον.

²⁵ Aristotle, *EN* 1106 b 14–16: ἡ δ’ ἀρετὴ πάσης τέχνης ἀκριβεστέρα καὶ ἀμείνων ἐστὶν ὥσπερ καὶ ἡ φύσις, τοῦ μέσου ἂν εἴη στοχαστική.

²⁶ Aristotle, *EN* 1106 b 28.

medicine the status of an exact art, of a fully developed science, the recourse to *στοχάζεσθαι*, by contrast, seems to guarantee the virtue attached to each art—using “virtue” in the strong sense of “efficacy” that Aristotle confers to it.²⁷ What is more, Aristotle makes the search for the just mean the very goal of an art: “That is why often one says in praise of well-made works [of art] that one could neither remove nor add anything; as if to say that if excess and default can destroy perfection, the just mean alone can assure it.”²⁸

Therefore one would do well, at least for the Hippocratic Corpus, to refrain from translating *στοχάζεσθαι* by “conjecture” or “use conjecture”, at least in the specialized meaning in which it would be used later by doctors such as Galen. Nevertheless, at the same time one can see that the context in which the verb is used, by allotting a large space to the Hippocratic doctor’s need for attaining a just measure adapted to each individual’s nature, already combines all the ingredients of a future reflection on the status of the art.²⁹ It is one of the more remarkable traits of the extraordinary fertility of Hippocratic medicine that it has been the inspiration and point of reference to the two diverging conceptions of the subject in Plato and Aristotle. The recourse to *στοχάζεσθαι*, presented as legitimate in the Hippocratic Corpus, is stigmatized by Plato before being rehabilitated by Aristotle in the name of the ideal of a just equilibrium and a just mean.

Nevertheless, I do not believe that one should venture to speak of a fully developed stochastic art in either Plato or Aristotle. The recourse to conjecture as a reasoned approach for reconciling the conflicting requirements of *τέχνη* and *ἐπιστήμη*, as conceptualized by a doctor such as Galen and before him by the Stoics, does not yet have a place in the Platonic and Aristotelian oeuvres. However, by striving to combine individual standard and scientific accuracy, the

²⁷ “Every virtue is, for the thing of which it is the virtue, that which at the same time fulfils its good disposition and ensures the perfect execution of the task proper to it. Thus, for example, the virtue of the eye makes the eye and its function excellent.” (Aristotle, *EN* 1106 a 15–19).

²⁸ Aristotle, *EN* 1106 b 9–14.

²⁹ The echoes of this debate on the role and status of conjecture, begun by the Hippocratic author, can be found even in contemporary medicine: cf. Ierodiakonou-Vandenbroucke (1993) 542–543; Vandenbroucke (1998) 12–16; Vandenbroucke (1998) 2001–2006; Vandenbroucke-de Craen (2001) 507–513. I am grateful to Professor H.F.J. Horstmannshoff for these references.

Hippocratic doctor was the first—not the least of his achievements—to establish the henceforth unchangeable perimeters of a still relevant debate about the unique status of the medical art. Even so, the recourse to *στοχάζεσθαι* does not yet constitute more than one of several possible ways of reconciling art and science within medicine; Galen was to be the first doctor to bring this endeavour to a successful conclusion in the framework of the Galenic corpus.³⁰

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³⁰ This study is in fact the first part of my research on the status of the art of medicine from Hippocrates to Galen, the principal results of which were presented in Geneva in the setting of the Entretiens de la Fondation Hardt about "Galen and Philosophy": Boudon (2003).

MODELLI ESPOSITIVI RELATIVI ALLA PROGNOSI
NEL *CORPUS HIPPOCRATICUM* (PRORRHETICO 2,
MALATTIE 1-3, AFFEZIONI, AFFEZIONI INTERNE,
PROGNOSI DI COS)

Daniela Fausti

Summary

In the Corpus Hippocraticum, prognosis and therapy are developed through observation of signs, as prescribed by Prognostic and Prorrhetic 2; the signs considered most significant are non-verbal signs, i.e. clues, because they cannot be voluntarily altered and the sign provides a hypothetical indication (semiotic abduction). In the examined texts the attention is devoted to the use of these signs with prognostic and therapeutic indication value and we can observe that the inferential scheme tends to aphoristic forms because the doctors need quick reference books, such as Coan Prognoses.

Già Émile Littré nel 1839 nell'*Introduction* alla sua edizione di Ippocrate aveva notato¹ che la prognosi era uno dei punti essenziali che separano la medicina antica da quella moderna. Ciò che noi intendiamo per 'sémiotique' è qualcosa di completamente diverso: una frazione dell'enciclopedia medica, che ci informa sul valore dei segni, ma non ha un predominio assoluto sulle altre parti, anzi è subordinata alla diagnostica; nei testi del *Corpus*, invece, la prognosi domina tutta la scienza, è per così dire una chiave interpretativa, perché quello che si prevedeva diventava la regola.

In questo modo, ciò che noi chiamiamo diagnosi² e ciò che chiamiamo prognosi si trovano confuse e riunite, poiché la medicina ippocratica diagnosticava a partire da una condizione attuale, ma prevedeva secondo le regole dell'arte un certo sviluppo della malattia

¹ Cfr. Littré (1839) *Introduction*, Ch. XIII, vol. 1, 451-454.

² Si intende per diagnosi l'identificazione di una malattia in base ai sintomi che presenta e all'anamnesi; la prognosi invece è il giudizio dato dal medico sul probabile decorso ed esito della malattia o sulle conseguenze di un fatto traumatico. Cfr. per una breve storia dei due termini nell'uso medico, Marcovecchio (1993) ss. *vv.*

e nel contempo ne valutava alcune circostanze del passato, come è detto chiaramente nel primo capitolo del *Prognostico*, trattato che è il punto di riferimento principe sull'argomento: la *pronoia*, la previsione del medico consiste nel *proginôskein* e nel *prolegein* cioè non solo nel prevedere, ma anche nel dichiarare prima, stando vicino al malato le sue condizioni presenti, passate e future; a partire dai mali presenti si potrà prescrivere la terapia migliore.³

Sulla confusione fra questi elementi sono illuminanti le osservazioni di Mirko Grmek, che sottolinea il fatto che se alcuni autori, ad es. quello di *Epidemie 1-3*, preferiscono gli enunciati sotto forma di prognosi a quelli sotto forma di diagnosi,⁴ è però più corretto ritenere che il medico non abbandonasse effettivamente l'esercizio della diagnosi. La contrapposizione fra queste due modalità dell'indagine clinica è chiara e completa solo nelle formulazioni astratte e si sfuma molto quando ci si volge ai concreti procedimenti intellettuali del medico dinanzi al malato. Per un verso la diagnosi moderna implica la prognosi, per un altro la prognosi ippocratica è almeno in parte, una 'diagnosi camuffata.' Aveva infatti anzitutto uno scopo tassonomico, evidenziare le regolarità tipologiche dei sintomi e fare ordine nella massa dei dati clinici, ma permetteva anche dal punto di vista sociale di avere immediatamente un riscontro sulle capacità del medico. La previsione non è il suo unico fine (come abbiamo visto nel primo capitolo del *Progn.*), sono perciò possibili distinzioni e accostamenti nosologici che fanno funzionare la prognosi ippocratica come la diagnosi dei medici moderni.⁵

L'importanza dell'argomento già nel I d.C. non era sfuggita ad Erotiano, che nel suo lessico, dandoci la lista delle opere ippocratiche mette al primo posto proprio i trattati di semeiotica.⁶ Quelli considerati propriamente semeiotici sono *Progn.*, *Prorrhético 1* e *2*⁷ e gli

³ *Prog.* 1 (p. 13, 1-7 Alexanderson; 2. 110 L.); cfr. anche *Epid. 1.11* (p. 164, 9-10 Jones; cap. 5, 2.634 L.): il compito del medico è descrivere il passato, conoscere il presente, prevedere il futuro. Cfr. su previsione e memoria le osservazioni di Vegetti (1996) 65-81:77-80.

⁴ Sul metodo di descrizione dei sintomi in *Epid 1-3*, cfr. Langholf (1983) 109-120.

⁵ Cfr. Grmek (1985) 499-501:500.

⁶ "Fra i trattati autentici di Ippocrate alcuni sono semeiotici, altri relativi alla *physis* ed eziologici, altri sono dedicati all'arte medica, altri ancora sono trattati terapeutici che si suddividono in dietetici e chirurgici, quelli dell'ultimo gruppo sono misti" (si tratta di *Aph.* ed *Epid.*, perché contengono elementi di semeiotica e terapeutica). Ed. Nachmanson (1918) 36,1-27.

⁷ Quest'opera viene giudicata non autentica da Erotiano, ed è in ogni caso indipendente da *Prorrh. 1*; quest'ultimo è forse ritenuto autentico dal grammatico,

Umore (*De humoribus*) Su base contenutistica oltre a queste opere possiamo inserire nel gruppo anche *Epid.*, *Aforismi*, *Crisi* (*De crisibus*) *Giorni critici* (*De diebus decretoriis*) *Prognosi di Cos* (*Coae Praesagitiones*).⁸ Il grammatico, prima di esporre la raccolta dei lemmi,⁹ dichiara che bisogna cominciare *apo tèn sêmeiotikên*, perché la *sêmeiôsis* deve precedere l'eziologia e la terapia, e inizia lo spoglio proprio dal *Progn.* Questo testo si impone quindi come fondamento di ogni teoria semeiotica e semiotica, poiché è il primo scritto che tenta un'elaborazione sistematica dei segni ed i cui punti portanti sono, oltre al primo, i capp. 24 e 25 dove compaiono le parole chiave di una costellazione semiotica costituita da *sêmeion*, *tekmêrion* e *logismos* o i verbi collegati.

Al cap. 24 leggiamo: "Chi sopravviverà e chi morirà dei bambini e degli adulti bisogna inferirlo attraverso tutti i segni così come sono stati singolarmente descritti per ogni singolo caso. Questo dico sulle malattie acute e le loro conseguenze."¹⁰ E ancora più precisamente al cap. 25:

Bisogna che chi si appresta a prevedere correttamente chi guarirà e chi morirà . . . conosca approfonditamente i sintomi e sia in grado di valutarli, considerando la loro efficacia reciproca, come è stato descritto in generale . . . bisogna inoltre sapere sui segni certi e su tutti gli altri segni che in ogni anno e in ogni luogo segni cattivi indicano qualcosa di negativo e segni buoni qualcosa di positivo . . .¹¹

Quindi valutando con attenzione questi segni li si può giudicare correttamente e avere successo.

Il meccanismo è abbastanza chiaro: i segni che conducono alla prognosi sono i *sêmeia* che, ponendosi alla base di un ragionamento di tipo inferenziale, forniscono innanzitutto una indicazione ipotetica (l'abduzione semiotica)¹² e in seguito, dopo osservazioni ripetute,

che ne trae più di 20 glosse; cfr. Potter (1995) 168; per notizie generali Jouanna (1992) 556–557; per problemi di datazione e stile di *Proth.* 2, cfr. García Novo (1995) 537–552 e Sierra Grado (2002) 591–610.

⁸ Cfr. Jouanna (1999) 14.

⁹ Su Erotiano e le sue fonti, cfr. von Staden (1992) 549–569.

¹⁰ Cap. 24 (p. 230, 1–4 Alexanderson; 2.188 L.).

¹¹ Cap. 25 (p. 230, 12 e 231, 1 Alexanderson; 2.188–190 L.).

¹² "Un'abduzione è un metodo per formulare una predizione generale senza alcuna assicurazione positiva che essa risulterà valida né in un determinato caso né solitamente." Tuttavia questo è l'unico metodo possibile per prevedere razionalmente il futuro sulla base dell'esperienza passata. Cfr. la definizione di Peirce (1931) 152, trad. it.

possono trasformarsi in “segni certi, prove” cioè *tekmêria*, diversi dai semplici “segni”, *sêmeia*.¹³

Il processo congetturale o deduttivo che viene applicato ha il suo punto fondamentale nell’inferenza, “Se ci troviamo in presenza del segno x, allora si verificherà l’evento y,” rappresentabile dall’espressione se *p* allora *q* (che indicano le proposizioni); naturalmente bisogna sempre tenere presente un codice che consenta l’abbinamento fra i segni e gli eventi, codice elaborato in forma più o meno chiara dalla medicina ippocratica.¹⁴ All’interno del *Corpus* c’è solo un altro trattato che programmaticamente affronta con la stessa metodologia questi problemi, aggiungendovi un’aperta polemica contro quei medici che guardano solo all’apparenza e ricercano la spettacolarità: il *Prorrh.* 2.

PRORRHETICO 2

Il trattato ha lo scopo di dimostrare l’attendibilità di un determinato metodo di lavoro, presenta aspetti epidittici, didattici ed impiega nell’esposizione vari mezzi retorici;¹⁵ su questo aspetto non ci soffermeremo,¹⁶ concentrando invece l’attenzione sugli altri due. La parte epidittica occupa i primi quattro capitoli, i capp. 5–43 contengono invece la parte didattica, tesa a dimostrare l’applicazione pratica di quanto teorizzato prima, presentando il significato prognostico dei segni relativi a varie malattie.

L’inizio è un chiaro attacco polemico: “Vengono raccontate molte predizioni di medici belle e meravigliose, tali che io stesso non ho mai fatte né ho sentito fare da altri.”¹⁷ Questi cattivi medici spostano l’attenzione dal problema reale, annunciando per esempio ad un paziente che non sembra in grado di sopravvivere, che riacquisterà

¹³ Lavori di riferimento principali: Diller (1932) 106–123; Di Benedetto (1986) 97–125; Manetti (1987) 57–79; Langholf (1990) 232–257 e (1997) 912–921; Perilli (1991) 153–179 e (1994) 59–97; Sebeok (1999–2000) 37–60; 46–52.

¹⁴ Cfr. per la medicina galenica le interessanti osservazioni di Fortuna–Orilia (2001) 110–121 e specificamente sul metodo diagnostico di Galeno, Fortuna (2001) 284–304: 295 ss.

¹⁵ Anche la lingua nella parte iniziale è ricercata e possiamo individuare termini rari.

¹⁶ Cfr. le relazioni di Tim Stover, *Rhetoric and discursive technique in the Hippocratic treatise Prorrhetic 2* (in questo volume, pp. 345–361) e Nancy Demand, *Hippocratic Doctors and Non-compliant Patients*, presentate in questo convegno.

¹⁷ Cap. 1 (p. 218, 1–4 Potter; 9.6 L.).

la salute, ma le dita dei piedi si anneriranno e andranno in cancrena oppure un altro tipo di previsione consiste nel ‘vaticinare’ (*prophētizein*)¹⁸ riguardo alle malattie e ai tempi passati senza mai commettere errori.

Il giusto metodo per elaborare la prognosi viene esposto all’inizio del cap. 2: “Io invece non farò divinazioni di questo genere (*mantousomai*),¹⁹ ma scrivo i segni attraverso i quali si deve congetturare (*tekmairesthai*)²⁰ tra i malati quali guariranno e quali moriranno e quali moriranno in un tempo breve o lungo.”²¹ Si contrappone l’inferenza logica basata sui segni all’inferenza divinatoria basata pure sul segno, ma su un segno ambiguo,²² non caratterizzato come quello medico dall’univocità di significato (cfr. *Prog.* cap. 25); i segni divinatori sono segni deboli, quelli della medicina sono segni forti, che possono trasformarsi in prove.²³ Più avanti si sottolinea che chi voglia fare con successo le sue previsioni deve farlo dopo aver osservato attentamente tutti i particolari e ricordando di essere prudenti.

Io consiglio *symbolouō*,²⁴ di essere il più possibile accorti non solo nella medicina in generale, ma anche nelle previsioni di questo genere, tenendo presente che se uno fa una esatta previsione sarà ammirato dal paziente che sta curando, ma se sbaglia, non solo sarà odiato, ma

¹⁸ Unica occorrenza nel *CH* (p. 218, 18 Potter; 9.6 L.); sul significato ironico delle formazioni verbali in ῥζω, cfr. Garcia Novo (1995) 548; il verbo nella forma usuale, *prophēteuō* compare usato sempre ironicamente in Galeno, in *Hipp. de nat. hom.* (15.172 K.) contro medici ciarlatani, mentre il sostantivo è usato per deridere medici saccenti in *Hipp. Prorrh. 1, 3.18* (16.761 K.) e sapienti in genere (in *Hipp. 3 Epid.* 17A. 568 K.).

¹⁹ Il verbo ha naturalmente un uso marginale all’interno del *CH*; compare qui e in *Epist.* 27 (p. 112, 26 Smith; 9.410 L.) e nella forma composta con *kata-* in *Art.* 9 (p. 218, 14 Whittington; 4.100 L.) e *Epist.* 20 (p. 96.22 Smith; 9.386 L.). In *Art.* è usato con il senso di fare affermazioni senza fondamento.

²⁰ Siamo nella linea di pensiero scientifico inaugurata da Alcmeone di Crotone, il *tekmairesthai* è il tipo di indagine concessa agli uomini, mentre la *saphêneia* appartiene solo agli dei (DK 24 B 1).

²¹ Cap. 2 (p. 220,7–11 Potter; cap. 1, 9.8 L.). Il passo è famoso; è citato da Galeno nel *De praenot. ad Posth.* 4 (14.620 K.) (CMG V 8,1), 88–90 dove peraltro nega all’opera la paternità ippocratica.

²² Cfr. all’interno del *CH* l’analogo atteggiamento in *Acut.* 8 (p. 39,8–20 Joly; 2.240–242 L.).

²³ Cfr. Manetti (1994) 23–27.

²⁴ Il verbo è poco utilizzato nel *CH*; lo troviamo oltre che in questo passo, in *Aff.* 6 (p. 14,13 Potter; 6.214 L.), *Fract.* 16 (p. 136,23 Whittington; 3.474 L.) e *Vict.* 4.88 (p. 99,9 Joly; 6.644 L.). Cfr. l’*Index Hippocraticus*, s.v. ed il TLG in versione computerizzata. Questi strumenti sono stati utilizzati per verificare le varie occorrenze.

darà l'impressione di essere folle. Perciò io consiglio *keleuô* di fare le previsioni e tutto il resto con prudenza.²⁵

Il metodo è ribadito anche nel cap. 3 dove l'autore discute la presunta precisa conoscenza da parte di alcuni medici sugli esercizi e le fatiche fisiche e dichiara di non poter impedire che qualcuno ci creda, perché le supposizioni (*hyponoêmata*)²⁶ non sono sottoponibili a verifica, in quanto non sono intaccate da nessun segno, né buono né cattivo. Le supposizioni non devono dunque avere parte nell'arte medica perché non sono frutto di vera indagine; la sua linea di comportamento è ancora una volta chiara:

anzitutto conoscendo questo bisogna fare l'inferenza sulla base dei segni, poi fare le previsioni in maniera dubitativa (*endoiastôs*)²⁷ e nei limiti della conoscenza umana (*anthrôpinôs*)²⁸ e contemporaneamente pensare che le persone che riferiscono un fatto, presentano le cose in maniera più straordinaria di quanto sia accaduto.²⁹

Al cap. 7 troviamo una sintesi di tutto il sistema: "dopo aver considerato comparativamente tutti i segni, nei casi di suppurazione e consunzione bisogna predire chi sopravviverà e chi morirà."³⁰ Sono quindi presenti nell'opera le parole chiave della costellazione semiotica inferenziale; vediamo ora l'applicazione pratica di questa teoria.

Nei testi ippocratici lo schema inferenziale 'se *p* allora *q*', di cui si è già detto sopra, costituisce spesso il meccanismo congetturale che permette al medico, prima di conoscere, e poi procedere alla prognosi o a ciò che è necessario. La prima parte introdotta da se (protasi) è costante e ci riporta i dati dell'osservazione, la seconda (apodosi) può variare, di solito contiene una prognosi, ma talvolta anche diagnosi o terapia e può essere più o meno articolata. Lo schema tipo è ad es. al cap. 15 del *Prorrh.* 2: "Questi sono i segni: se il pus si forma nell'articolazione, questa necessariamente diven-

²⁵ Cap. 2 (p. 222, 16–22 Potter; 9.10 L.).

²⁶ *Hapax* nel *CH*; (p. 224, 2 Potter; 9.10 L.).

²⁷ Due occorrenze nel *CH*, *Prorrh.* 2, 3 (p. 224, 8; 9.10 L.) ed *Epid.* 1.1.2 (p. 148, 14 Jones; 2.224 L.).

²⁸ L'avverbio ricorre nel *CH* in *Prorrh.* 2, 2 al comparativo (p. 220, 19 Potter; 9.8 L.) e nel cap. 3 (p. 224, 9 Potter; 9.10 L.); e *Coac.* 118 (5. 608 L.). L'autore è ben consapevole in assoluto dei limiti dell'arte medica, poichè non sempre la *technê* umana può guarire, come dice nel cap. 8 a proposito dei pazienti anziani e gotosi che conducono una vita sedentaria. Affermazioni simili al cap. 19: né il tempo né l'arte in alcuni casi possono restituire la vista, cfr. von Staden (1990) 85–97.

²⁹ Cap. 3 (p. 224, 7–10 Potter; 9.10 L.).

³⁰ Cap. 7 (p. 240, 16–18 Potter; 9.26 L.).

terà più rigida”;³¹ un’esposizione ben diversificata è al cap. 19 dove troviamo una prima serie di protasi introdotte da ἐπὶν, ἥν, εἰ che illustrano la situazione riscontrata dal medico e la conseguente prognosi in casi di rottura dell’occhio; per coloro la cui pupilla si sposta è impossibile che ci siano miglioramenti (i malati di questa specifica situazione sono indicati con il dativo, la prognosi espressa dall’aggettivo *adynatoi*), infine un’altra possibilità: i piccoli spostamenti della pupilla possono migliorare, a meno che sopravvengano altri danni.³²

Queste formulazioni non sono però rigide; talvolta la protasi e l’apodosi sono unite attraverso il verbo *sêmeinein*, che può reggere un verbo all’infinito (cap. 4): “Ma se (εἰ) le urine sono acquose e in quantità maggiore di quanto è stato prescritto di bere, questo è segno, *sêmeinei* che il paziente disobbedisce.” Oppure (cap. 22): “Ma se (ἥν) si manifesta qualcuno dei segni (che io ho descritto) *sêmeinei*, annuncia morte al feto e pericolo alla donna incinta.” La prognosi può essere formulata con un’espressione alternativa, come *elpis* (cap. 24): “Se (εἰ) l’ulcera ha sede solo nella parte sinistra e la donna resta incinta . . . c’è da aspettarsi piuttosto *elpis*³³ che metta al mondo un figlio maschio.”³⁴

I metodi di indagine consigliati dall’autore del *Prorrh.* 2 sono abbastanza complessi e danno importanza sia all’osservazione di aspetti esterni (segni non verbali) sia all’assunzione di informazioni attraverso l’interrogatorio del paziente (segni verbali);³⁵ al cap. 2 leggiamo:

“chi potrebbe non riconoscere i malati di idropisia e di consunzione?” oppure: “se uno vede persone sofferenti di emorroidi che bevono molto d’inverno e hanno un colorito buono è possibile anticipare (*proeipein*) che con molta probabilità³⁶ in primavera soffriranno di emorragie così in estate saranno pallidi e pieni di liquidi . . . è necessario che chi desidera tali successi, faccia la prognosi dopo essersi informato di tutti questi dettagli.”³⁷

Qualche volta sulla base dell’osservazione visiva si conosce già la risposta alla domanda (cap. 42): “Se queste persone (che soffrono di

³¹ Cap. 15 (p. 256, 5–7 Potter; 9.40 L.).

³² Cap. 19 (p. 262, 2–15 Potter; 9.46 L.). Stessi schemi al cap. 18.

³³ Cfr. Perilli (1994) 67–80.

³⁴ Cap. 4 (p. 232, 22–24 Potter; 9.18 L.); cap. 22 (p. 266, 20–21 Potter; 9.50–52 L.); cap. 24 (p. 272, 25–28 Potter; 9.56 L.).

³⁵ Come peraltro nel *Prog.*

³⁶ L’espressione usata è *pollai elpides*.

³⁷ Cap. 2 (p. 220, 24–25; 5–8 e 11–12 Potter; 9.8–10 L.).

emorragie) presentano un brutto colorito, domanderemo se soffrono di mal di testa. Risponderanno di sì.”³⁸

Un esempio dell'indagine condotta col sistema domanda/risposta è al cap. 41. In posizione iniziale il verbo *skeptesthai*, che introduce l'elenco di ciò che si deve indagare in relazione alle affezioni dell'anca. Abbiamo due gruppi di malati, vecchi e giovani, indicati con la formula del dativo plurale,³⁹ poi i sintomi e la prognosi, ma per i giovani c'è un supplemento di indagine con domande (*epaneresthai ei*) e sulla base delle risposte si crea un'ulteriore casistica nella prognosi.⁴⁰

Tornando alla parte epidittica, alla fine del cap. 4, quando ritiene di aver ormai dimostrato la superiorità della prognosi basata sull'osservazione dei segni rispetto alle altre che sono solo spettacolari, dopo aver dichiarato di conoscere bene i suoi avversari e la loro mancanza di esattezza, l'autore conclude che perciò ha intrapreso a scrivere queste cose. Emerge una personalità forte, che sta componendo il suo testo come oggetto di studio o di consultazione, come si evince dai numerosi riferimenti allo scrivere;⁴¹ si vuole creare una base per il buon medico che deve cercare la corretta interpretazione dei segni attraverso il *logismos*.⁴²

SITUAZIONE IN ALTRI TRATTATI

Ci sono altri trattati all'interno del *Corpus*, come quelli noseologici e tecnico-terapeutici che presentano un minor grado di elaborazione teorica sull'importanza del segno rispetto a scritti metodologici, quali il *Progn.* o il *Prorrh.* 2 o a quelli famosi come *Arie*, *acque e luoghi* (*De aere, aquis et locis*), *La malattia sacra* (*De morbo sacro*), *L'arte* (*De arte*),⁴³ tuttavia è possibile individuare anche in questi testi l'uso dell'in-

³⁸ Cap. 42 (p. 290, 9–11 Potter; 9.72 L.).

³⁹ “Per quanti dei vecchi... per i giovani invece...”. Cap. 41 (p. 286, 19–28, 288, 1–11 Potter; 9.70–72).

⁴⁰ Stessa situazione al cap. 24.

⁴¹ Nelle ultime righe del cap. 4 troviamo ben tre esempi: scrivo su questi argomenti; ho preso gli scritti di altri medici; ho intrapreso a scrivere (p. 234, 16–22 Potter; 9.20 L.). Numerose altre occorrenze del verbo *graphein* creano una rete di riferimenti all'interno del trattato, sottolineando l'importanza del testo scritto.

⁴² Sul significato e l'importanza del *logismos* nel *CH* cfr. Perilli (1994) 86–88 e sul *CH* come testimone più antico del termine, cfr. Velardi (2001) 53–54.

⁴³ Cfr. sull'argomento: Fausti (2002) 229–244.

ferenza come mezzo prognostico, sia pure in forme meno esplicite e regolari. Sono stati perciò esaminati i modi di presentazione delle malattie cercando di individuare i modelli espositivi attraverso cui vengono messi in evidenza i sintomi, le cause, la terapia e la prognosi, che spesso è collegata all'individuazione dei giorni critici, o si limita all'affermazione di una probabilità più o meno ampia; possiamo fare dunque una breve panoramica seguendo per comodità l'ordine numerale.

Malattie 1 (De morbis 1), trattato indirizzato al medico, perché sappia affrontare bene qualsiasi contraddittorio; è diviso in due sezioni. La prima riguarda questioni generali come le cause delle malattie,⁴⁴ prognosi, problemi di opportunità di intervento, la seconda riguarda varie malattie, spesso acute.⁴⁵ I capitoli in generale sono strutturati in questo modo: eziologia, poi prognosi, riconducibile a due schemi: *a)* se *x* (protasi introdotta da ἤν o ὅταν, prognosi positiva o negativa⁴⁶ *b)* se *x*, prognosi positiva, se non *x*, prognosi negativa. La terapia non ha molto spazio, tranne in qualche caso, come al cap. 28, dove viene praticata la flebotomia.

Alcuni esempi dello schema *a*: al cap. 19 protasi introdotta da ἤν e conseguente prognosi nell'apodosi, schema ripetuto per ben cinque volte in una complicata casistica di ascesso al polmone con diverse possibilità di risoluzione. Due esempi: caso 1, se l'ascesso matura rapidamente e si rompe, il paziente guarisce;⁴⁷ caso 4, se la rottura avviene, ma quando il paziente è ormai indebolito e costretto a letto, per lo più questo muore.⁴⁸

Casi analoghi. Cap. 28 (pleurite e polmonite senza espettorazione): se non c'è espettorazione, il polmone diventa duro, si secca e provoca la morte del malato;⁴⁹ cap. 29, se febbre ardente e pleurite si trasformano in polmonite, la prognosi ha un'alta percentuale di mortalità,

⁴⁴ Tutte le malattie sono causate da bile e flegma (cap. due), se si considerano i fattori che sono all'interno del corpo.

⁴⁵ Sono stati privilegiati i casi di malattie acute per conservare continuità con il *Progn.*

⁴⁶ Al cap. 31 abbiamo una variante dello schema, dove la prognosi riguarda solo il grado di serietà della malattia, in casi di pleurite e polmonite: "Bisogna sapere che la malattia è grave quando i malati cominciano ad espettorare uno sputo un po' denso" (p. 178, 21–23 Potter; 6.202 L.). L'apodosi espressa in forma dichiarativa precede la protasi.

⁴⁷ Cap. 19 (p. 140, 18–21 Potter; 6.174 L.).

⁴⁸ Cap. 19 (p. 142, 16–18 Potter; 6.174 L.).

⁴⁹ Cap. 28 (p. 174, 4–6 Potter; 6.198 L.).

perché i malati all'apparire di una nuova malattia sono già deboli e non sono in grado di sopportarla fino a che lo sputo giunga a maturazione nel polmone e per lo più muoiono per debolezza.⁵⁰

Schema *b*: cap. 26, pleurite. Abbiamo prima una prognosi positiva:

“Quando le secrezioni attaccate al fianco maturano e vengono espettorate dalla bocca i malati guariscono”; poi una negativa, se mutano le condizioni di partenza: “se però le secrezioni che sono attaccate all’inizio al fianco sono molte e poi se ne aggiungono altre, i malati muoiono in breve tempo”... ma (terza possibilità) “se si forma una suppurazione interna, alcuni muoiono, altri invece si salvano”⁵¹, tutto questo si chiarisce *diadēloi* in sette, nove, undici o quattordici giorni. L’ultima parte della prognosi segue la teoria dei giorni critici.

Cap. 27, polmonite: “Se verrà espulso nei giorni critici, ciò che si è putrefatto, il paziente guarisce, ma se non può sopportare la quantità di ciò che sopravviene, muore nella maggior parte dei casi (*hōsta polla*)”;⁵² ma se i malati sopravvivono per ventidue giorni, vengono tutti colpiti da ascessi, in particolare quando la polmonite e la pleurite sono molto gravi.

In quest’opera fra i termini collegati al segno, abbiamo solo un caso di *diasēmainein* usato intransitivamente, con il senso di manifestarsi, accadere, cap. 18: i malati perdono spesso conoscenza e questo accade *diasēmainei*, quando l’erisipela si attacca al polmone.⁵³

Malattie 2 (Morb. 2). In quest’opera troviamo il termine *sēmeion*⁵⁴ in due passi che sono già stati molto commentati:⁵⁵ per un empiema polmonare il diverso aspetto del pus è un segno che annuncia o il ritorno alla salute o la morte (cap. 47); in un ‘affezione polmonare, un segno esterno, la caduta dei capelli, rivela che il paziente morirà (cap. 48).⁵⁶ Nel primo caso introduce la prognosi, fausta o infausta,

⁵⁰ Cap. 29 (p. 176, 9–18 Potter; 6.200 L.).

⁵¹ Cap. 26 (p. 168, 3–10 Potter; 6.192–194 L.); cfr. Di Benedetto (1966) 315–368 e (1986) 126–142.

⁵² Cap. 27 (p. 170, 16–25 Potter; 6.196 L.); cfr. von Staden (2002) 23–43.

⁵³ Cap. 18 (p. 138, 21–23 Potter; 6.172 L.).

⁵⁴ Il verbo compare come *ensēmainein* con il senso di segnalare, registrare un suono, in un caso di sordità, al cap. 4 (p. 196, 3 Potter; 7.12 L.).

⁵⁵ Cfr. Jouanna (1983) 21–22 e 251 n. 2 e (1978) 146 n. 3; Di Benedetto (1986) 98 giudica questo procedimento interpretativo “ingenuo-primitivo.”

⁵⁶ Cap. 48.2 (p. 184, 6–7 Jouanna; 7.72 L.).

mentre nel secondo caso ha valore eziologico. Alla fine del cap. 47 leggiamo: ⁵⁷

il segno *sêmeion* che il malato sta per guarire è che il pus è bianco e limpido . . . e così nella maggior parte dei casi guarisce, se però; il pus che fluisce ha all'inizio il colore del tuorlo d'uovo . . . avviene la morte dopo il deflusso del pus.

In assenza del termine chiave il medico conosce altri mezzi per evidenziare il sintomo, cfr. l'inizio del cap. 44 dove per la pleurite si dice ὅταν οὕτως ἔχει.⁵⁸

In linea generale in questo trattato sono presentati i vari sintomi poi la prognosi viene inserita fra la semiologia e la terapeutica, oppure è messa alla fine. Sono importanti i giorni critici, come si nota quando la prognosi è positiva solo se il malato riesce a superare un certo giorno, come al cap. 44: "ma se uno supera il quattordicesimo giorno si salva"; stesse indicazioni ai capp. 45 e 63.

Malattie 3 (De morbis 3). In questo trattato i termini *sêmeion* e *sêmeinein* sono più volte attestati; ai capp. 6 e 15 e al 16⁵⁹ abbiamo il sostantivo usato a proposito della lingua che fornisce indicazioni per ciò che concerne la risoluzione della malattia; il miglioramento in caso di febbre ardente, polmonite o pleurite è visibile dai segni sulla lingua.⁶⁰ Al cap. 2 troviamo il verbo: "se un paziente soffre di mal di testa . . . questo indica impurità."⁶¹

Particolarmente interessante è il cap. 15 dove oltre a comparire numerose volte lo schema inferenziale introdotto da ἦν, ἦν δὲ μὴ, εἶ, εἶ δὲ μὴ, *sêmeion* viene considerato un fenomeno/segno da mettere in relazione con il nome. Denominare la malattia o attribuire un nome in uso ad un complesso di sintomi, è già un interpretare attraverso un procedimento di valutazione dei sintomi ed in questo caso siamo di fronte al problema se l'assenza di alcuni sintomi comporti o meno il rifiuto della denominazione della malattia. L'autore

⁵⁷ Cap. 47 b. 5 (p. 182, 19 e 184,1-4 Jouanna; 7.72 L.).

⁵⁸ Cap. 44.2 (p. 175,13 Jouanna; 7.62 L.).

⁵⁹ Cap. 6 (p. 14, 20-21 Potter; 7.124 L.); cap. 15 (p. 32, 2-5; 7.136 L.); cap. 16 (p. 42, 16-18 Potter; 7.146 L.).

⁶⁰ Le alterazioni della lingua sono segnalate anche in *Aff.*, 11 e 14 (p. 20, 13-14 Potter; 6.218 L. e p. 24, 23-24 Potter; 6.222 L.) o *Morb. I*, 29 (p. 174, 25-176, 1-2 Potter; 6.198 L.).

⁶¹ Cap. 2 (p. 8, 8-9 Potter; 7.118 L.).

dichiara “se appariranno pochi di questi segni, non bisogna credere che non si tratti di polmonite, infatti è una forma leggera di questa malattia” rendendosi conto che la scarsità di segni distintivi non impedisce di risalire alla giusta denominazione.⁶²

Qualche esempio da *Affezioni* (*De affectionibus*) e *Affezioni interne* (*De affectionibus interioribus*); in *Aff.*, sono formalmente assenti i termini chiave *sêmeion* e collegati, tuttavia ritroviamo le relazioni di tipo condizionale già viste: se x, prognosi positiva, se non x, negativa nel primo esempio; se x, prognosi negativa, se non x prognosi positiva nel secondo; nel primo caso (pleurite, cap. 7) se il pus è espettorato, il paziente guarisce, ma se non c'è espettorazione subentra un ascesso interno e la malattia si prolunga.⁶³ Al cap. 11 la successione è rovesciata: nella febbre ardente se il male si cambia in polmonite, pochi si salvano, se questo non succede, molti si salvano.⁶⁴ Per la frenite la prognosi è leggermente diversa: pochi sfuggono a questa malattia, che è prodotta dalla bile, ma nel caso in cui si trasformi in polmonite (se x, prognosi parzialmente positiva) alcuni si salvano (cap. 10).⁶⁵

In *Int.* troviamo il verbo *apôsêmeinein* usato intransitivamente: “dove credi che i segni (del pus all'interno del petto) siano più evidenti, là devi fare l'incisione o la bruciatura” (cap. 3).⁶⁶ In questo caso di polmonite, all'inizio viene presentata l'eziologia che attribuisce la causa della malattia all'addensarsi del sangue o del flegma salato nel polmone, seguono poi i sintomi: οὔτως δὲ τὰδε πάσχει verbo che viene riutilizzato poco dopo per segnalare la presenza di disturbi diversi ἀλλοῖα πάσχων . . . “qualora il polmone si pulisca attraverso l'espettorazione, c'è da attendersi la guarigione.” Abbiamo quindi: se x, prognosi positiva espressa con la formulazione *elpis* + infinito,⁶⁷ ma se la malattia si prolunga, ulteriore situazione, la prognosi è riservata. Alla fine viene fornita la terapia.⁶⁸

⁶² Cap. 15 (p. 34, 11–13 Potter; 7.140 L.); cfr. Di Benedetto (1986) 99–100. Concetti analoghi al cap. 10: una forma più leggera di angina, che non comporta determinati segni è chiamata *parakunanchê* (p. 22, 1–2 Potter; 7.130 L.).

⁶³ Cap. 7 (p. 16, 11–14 Potter; 6.216 L.).

⁶⁴ Cap. 11 (p. 22, 2–4 Potter; 6.218 L.).

⁶⁵ Cap. 10 (p. 20, 9–11 Potter; 6.218 L.).

⁶⁶ Cap. 3 (p. 86, 4–6 Potter; 7.176 L.).

⁶⁷ Cfr. il cap. 24 del *Prorrh.* 2 e la nota 33.

⁶⁸ Per osservazioni generali sull'esposizione dei sintomi in *Int.*, cfr. Roselli (1990) 159–170.

PROGNOSE DI COS

Questi modelli espositivi molto vari e articolati in capitoli abbastanza lunghi e discorsivi, diventano invece regolari e stringati in *Coac.*, che sono un vero e proprio prontuario prognostico organizzato in modo che la lettura possa essere cominciata in ogni punto senza conoscenza del contesto e tuttavia rimanendone all'interno. Siamo cioè di fronte ad un'opera aforistica che consiste di 640 sentenze molto brevi, in media di 1–3 righe (la più lunga di 9 righe nell'ed. di Littré),⁶⁹ che dal punto di vista stilistico presenta tre caratteristiche fondamentali:

- 1 Espressioni brachilogiche
- 2 Struttura asindetica
- 3 Mancanza o minimo significato di una macrostruttura del testo.⁷⁰

Questa secchezza espressiva non impedisce il raggiungimento dello scopo dell'opera, che è quello di costituire un ampio manuale di consultazione sulla prognosi a cui durante la sua attività il medico possa riferirsi per inquadrare determinati sintomi. Siamo ormai negli ultimi decenni del IV a. C., in una fase della scienza greca che rielabora e raggruppa in nuovo modo testi letterariamente compiuti; lo stile aforistico⁷¹ diventa un mezzo di condensazione e concentrazione che rende più facile e certo più veloce il ricorso ad un trattato che aiutava il medico antico in un campo, come più volte si è sottolineato, molto importante per la sua fama.

Come notava già il Littré⁷² esistono vistosi punti di contatto con *Progn.*, *Prorrh. 1* e *Aph.*; in particolare è interessante un gruppo di sentenze (482–487)⁷³ che si presenta come un prontuario dedicato a sintomi selezionati, che possono essere segni da osservare in prima istanza, derivati dal *Progn.* Si vedano ad es. 482, 483, 484, sulla

⁶⁹ Cfr. Littré, vol. V, 1846 (1978) e le osservazioni di J. Althoff (1999) 52. Su *Coac.* esiste la dissertazione dattiloscritta del 1959 di O. Pöppel e si attende l'ed. di Langholf, cfr. 52 nota 49.

⁷⁰ Cfr. J. Althoff (1999) 37.

⁷¹ Sulla presenza di diversi generi letterari nel *CH*, cfr. Wittern (1998) 17–63.

⁷² Cfr. anche Jones (1923) XXII, che conclude che il *Prorrh. 1* era il testo più antico, circa 440 a.C. e *Coac.* il più recente, 410 a.C.; sull'argomento cfr. le osservazioni di Jouanna (1992) 554–555: l'opera ha come sue fonti principali, *Progn.*, *Prorrh. 1*, *Aph.*; non è nella lista di Erotiano, ma è citata due volte nel *Glossarium* di Galeno.

⁷³ Indicati come paragrafo XXVII nell'ed. Littré, 5. 692–694.

temperatura delle parti del corpo, sulla facilità di movimenti, sull'annerimento delle dita che sono una suddivisione in tre parti del cap. 9; 487 riunisce parti del cap. 3 sulla posizione del malato, che deve essere il più possibile simile a quella dei sani e del cap. 10, sul sonno e l'insonnia. Questi interventi sembrano finalizzati a rendere più rapida la consultazione.⁷⁴

Se esaminiamo il gruppo di aforismi dal 224 al 229 dedicato ai segni sulla lingua⁷⁵ constatiamo che la lunghezza oscilla fra le tre e le quattro righe, tranne l'ultimo, che è del tipo più sintetico possibile. "Lingua ispida, disseccata, è segno di frenite"⁷⁶ due aggettivi al nominativo fanno conoscere il sintomo, un terzo aggettivo ha valore prognostico, la struttura sintattica è ridotta al minimo (cfr. la frase identica in *Prorrh. I*, 3).⁷⁷

Negli altri casi la prognosi è espressa con l'aggettivo con valore prognostico *thanasimon* e *kakon* (224 e 227), con *sêmeion* + genitivo (225 e 227), con il verbo *sêmeinein* 225, 226, 228. Il 225 è più articolato, perché dà indicazioni temporali sulla base dell'intensità del segno: "La lingua coperta alla biforcazione di una specie di saliva bianca è segno *sêmeion* di allentamento della febbre, se la copertura è spessa, per quel giorno stesso, se è più sottile per il giorno successivo, se è ancora più sottile per il terzo giorno; il medesimo inspessimento sulla punta della lingua, indica *sêmeinei* la stessa cosa con minor forza. "Nel primo caso è usato il sostantivo, nel secondo il verbo con una piccola *variatio*. Da segnalare al 226 l'avverbio *asêmôs* dall'aggettivo *asêmos* "non contraddistinto da segni individuali", senza segni indicanti crisi;⁷⁸ anche l'assenza va valutata.

⁷⁴ L'opera, che segue l'ordine *a capite ad calcem* in alcune delle sue parti (155–319 e 357–465), nell'edizione di Littré è divisa in sette sezioni e trentacinque paragrafi, in realtà dal punto di vista contenutistico questa suddivisione si può limitare a quattro grandi blocchi, cfr. Jouanna (1992) 555.

⁷⁵ La lingua era un organo facilmente visibile, ma anche interno al corpo, quindi costituiva un punto di osservazione importante; 5. 634 L.

⁷⁶ Caso analogo con aggettivo indicante la malattia è il 239 (9.636 L.): "Sputo frequente, soprattutto se vi si aggiunge qualche altro segno, preannuncia la frenite"; stesso testo di *Prorrh. I*, 6.

⁷⁷ Nel paragrafo XII sulla voce ci sono altri aforismi presenti anche nel *Prorrh. I*; ad es. 244 la perdita della voce in seguito a una sofferenza indica una brutta morte (cfr. *Prorrh. I*, 55).

⁷⁸ Usato in *Epid.* 1–3 per indicare la scomparsa di malattie senza sintomi indicanti una crisi, cfr. Berrettoni (1970), p. 240; all'interno di *Coac.* è in 226, 366, 364, 367, 369.

Questi esempi, che si possono moltiplicare, mostrano chiaramente le formule stereotipe dell'aforisma prognostico. La forma espositiva più semplice è quella con *sêmeion*: “Brividi e dispnea sono segni di consunzione; dolori ai lombi sono segno di emorragia alle emorroidi” (17); “Torpori e insensibilità sono segno di imminente paralisi” (466);⁷⁹ o in alternativa con *sêmeinei*: “I lividi che sopravvengono durante una febbre indicano una morte rapida” (66); “L'urina acquosa indica le stesse cose se sono presenti i (sintomi) suddetti” (86); “sonni profondi indicano una crisi sicura” (147).⁸⁰ Spesso come abbiamo visto nei passi già esaminati, la prognosi è espressa da un aggettivo. In qualche caso l'apodosi precede la protasi,⁸¹ mettendo in prima linea l'esito della malattia: “Si muore a causa delle ferite, se si è colpiti al cervello . . . si muore, se ci sono grosse ferite al polmone . . .” (499);⁸² in ogni caso l'esposizione è sempre secca e stringata.

Alla fine di questo percorso, partito dal testo che dà la prima elaborazione teorica sul modo di elaborare la prognosi, il *Progn.*, e dall'altro testo teorico che vuole affermare la superiorità di questo tipo di procedimento, il *Prorrh.* 2, si arriva con il progressivo ridursi della varietà espositiva all'organizzazione aforistica di *Coac.* Il *sêmeinein* del dio di Delfi⁸³ ha perso la sua ambiguità ed è diventato il fondamento di un manuale di consultazione.

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⁷⁹ *Coac.* 5. 590 e 688 L.

⁸⁰ *Coac.* 5. 598; 602; 614 L.

⁸¹ Lo schema rovesciato “*q se p*” non è frequente.

⁸² Le ferite non sono una causa preferenziale di morte, ma qui l'autore sta segnalando quali sono le parti del corpo dove più facilmente le ferite causano la morte, seguendo una scala di pericolosità discendente (5.698 L.).

⁸³ Eraclito DK 22 B 93.

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PART TWO

THE SOCIAL CONTEXT OF HIPPOCRATIC MEDICINE

THE SOCIAL AND INTELLECTUAL CONTEXT OF *REGIMEN II*

John Wilkins

Summary

This paper addresses two questions, what is the social/historical context of Regimen II and how has the author organised his data? It establishes a framework for interrogating the Hippocratic text that is based on Galen's use of case studies across a wide social range, on his commentary on Hippocrates, Diocles, Mnesitheus and Praxagoras, and on his approach to terminology, definition and classification. The conclusion is that the Hippocratic text established its data successfully (to judge by Galen's criteria) before Aristotle and Theophrastus, but that the text was too laconic to be widely used. Hence Galen's new treatise rather than commentary on his Hippocratic predecessor.

Regimen II with its sister treatises *Regimen I* and *III* occupies a fascinating position in the intellectual history of late fifth and early fourth century Greece. *Regimen I* introduces fire and water as the constituents of the natural order, the first the dynamic force, the second the nutritive, and places human beings within that order, with some consideration of gender and human reproduction. This book is strongly influenced by Presocratic thought. In *Regimen II*, two introductory sections on the winds (37–38), which show that extreme winds from the north and the south can damage the civilised settled zone, the *oikoumene*, where human beings live, are followed by a catalogue of foods that lists many items of the Greek diet and attributes qualities to them. These qualities include sweetness, fat and saltiness, and in particular the *dunamis* (the 'power' or 'potential') of a food (39). *Regimen III* develops the daily and annual regime within which the food will be consumed, and corresponds to the areas of diet that Diocles of Carystus and Galen later entitled *Hugiēna*: there is much comment on a person's daily regime, bathing and exercise. It is in *Regimen III* that the author comes closest to Plato's criticisms of Herodicus of Selymbria as an example of those who give too much

attention to their physical health, at the expense of more important spiritual and intellectual considerations (*Republic* 405c–406c). I mention this since some, such as Ludwig Edelstein, have viewed ancient dietetics as a plaything of the idle rich. *Regimen IV* concerns dreams and their links with food and diet, but that treatise will not be discussed here.

Questions of diet were a rich area for discussion at the end of the fifth century BC. Plato in a number of dialogues approaches problems of provision, luxury, sacrifice, the city's relationship to the countryside, and the relationship between body and soul. Plato also mentions in *Gorgias* the cookery book of Mithaecus, which may herald new developments in cooking. Such developments were also reviewed on the comic stage where all social and cultural aspects of food and eating were a major preoccupation (see Wilkins 2000). Food too was a concern in official inscriptions and historical and other treatises since it lay at the heart of a city's ability to maintain vital systems among its population, both in sustaining life and in maintaining festivals and sacrifices to its patron gods. The Hippocratic text has an interesting relationship with these other texts. It shares with comedy the desire to name and list a large number of foods; it has a limited interest in social eating—social class is considered below, while the number of meals eaten every day is a concern in *Regimen III*. It also shares with Plato (for example in his *Timaeus*) a desire to place eating within a cosmic overview. At the same time, the Hippocratic text takes a non-ideological approach to such 'luxurious' items as cooks, fish-heads and pigs' feet (see Wilkins 2000).¹

Within the Hippocratic corpus, *Regimen II* is related to the geographical and climatic interests of *Airs, Waters, Places* and to the developmental approach to civilisation of *Ancient Medicine*. Cooking is part of the processing of foods that both distinguishes developed human societies from their early and vulnerable antecedents and breaks down dangerous raw qualities in foods into forms that the human body can tolerate (*Regimen II*.56, *Ancient Medicine* 3). Also of interest are *Nutriments, Humours, Nature of Man* and *Epidemics*.

The place of *Regimen II* in its philosophical context has been fully discussed by Fredrich, Joly (1960) and others, and is summarised in Joly and Byl (1984) 25–34. There are echoes of Heraclitus, Empedocles, Pythagoras, Anaxagoras, Hippon and the Sophists, which are syn-

¹ On the ancient diet in general see Garnsey (1999) and Dalby (1995).

thesised in a complex and sometimes confusing form. My aim in this chapter is to examine *Regimen II* in a different context from the one pursued in these studies, namely, in the light of Diocles' *Matters of Health (Hugieina) to Pleistarchus* and *On Vegetables* and of Galen's *On the Powers of Foods* and *On the Thinning Diet*, to establish its sophistication in the light of later developments in diet and nutrition.

Galen makes a number of revealing comments on *Regimen I–III*.² By the second century AD, there were doubts over authorship; an edition of *Regimen II* (perhaps with *III*) circulated as a book in addition to *I–III* combined. In Galen's view, furthermore, *Regimen I* does not reflect the thought of Hippocrates. It is not clear what he means by this. Perhaps he means the philosophical expression of the duality of fire and water, but if that is the case he appears to be content at least with the way in which that duality informs *Regimen II*. In Galen's own version of *Regimen II*, *On the Powers of Foods*, at least, diet and nutrition are declared to be the 'most useful' of the medical arts (1.1.1).

The author of *Regimen II* is working within an established dietary tradition: he sets out to correct the errors of predecessors who have spoken (perhaps written, 39) on the subject and have attempted to attribute a particular quality or *dunamis* to a particular food. These simple assessments do not work, he claims. Something that is sweet may bind or relax the stomach, may dry it or moisten it. Hence the need for a full catalogue of foods, each with its particular range of properties and qualities set out. Both Diocles and Galen address exactly the same problem. Galen (*On the Powers of Foods* 1.1.4) quotes Diocles' comment in *Health to Pleistarchus* (fr. 176 van der Eijk),

those then who suppose that substances that have similar flavours or smells or degrees of hotness or some other quality of this kind all have the same powers, are mistaken; for it can be shown that from substances that are similar in these respects, many dissimilar effects result (trans. van der Eijk).

Galen's methodology, which is based on the same idea, has a clearly expressed aim (1.1.44–45):

Generally speaking, one cannot properly test anything empirically without first accurately working out, by reasoning, the disposition to which

² *On the Powers of Foods* 1.1.35–6 = CMG V 4,2 212.12–213.10; cf Joly and Byl (1984) 21.

he is applying what is being tested. . . . Since without knowing precisely the properties of the materials we use it is impossible to help those in need of them, it is necessary here to discuss the properties in foodstuffs. . . . Knowledge of them is achieved with difficulty by a defining test³ over a long time, and from the nature of the odours and flavours which the foods being tested appear to have; and as well from the consistency they have acquired in respect of viscosity, friability or loose texture; and solidity, lightness or heaviness. All these contribute to their elucidation so that, if on arrival in a foreign country, you were to see some food you have never seen before, you will have a significant starting point towards knowledge of its property. (trans. Powell)

The choice of foods in all three authors is revealing, given that certain items are chosen and certain excluded. Galen, even though he has a much larger number of items than our Hippocratic author, has just declared that his methodology should allow a doctor to identify something he has never met before. This seems to be a methodology that can be universally applied. Why then the need to list particular foods? I presume that a certain range of foods is required, so that further new items can be included within certain sub categories, as they are discovered.

For cereals, the Hippocratic text (42–3) mentions barley, wheat, a form of primitive wheat,⁴ oats and millet. There are many beans and pulses. Animals are listed in the order cattle, goat, pig, sheep, ass, horse, dog, wild boar, deer, hare, fox and hedgehog. Birds named are doves, partridges, pigeons, cocks, turtledoves, geese and ducks and marsh-fowl. Fish are: the scorpion fish, a number of bream, flat fish such as the torpedo and turbot, octopus and cuttlefish, a number of shell fish, and pickled fish. Eggs, cheese, honey and wine are listed; then vegetables (which include many herbs) and fruit. In the categories, there is a strong interest in moisture and dryness and heating and cooling, which appears to tie in with the elements singled out in *Regimen I*. Thus, for example, the headline quality for both birds and fish is dryness, while wild animals are drier than their domestic equivalents (49).

³ For the *diōrismenē peira* see van der Eijk (1997). The 'defining test' is presented as Galen's contribution, but it not absolutely clear what that means, and how it is better than Diocles' method. Both are much more experiment based, apparently, than the Hippocratic author.

⁴ Joly and Byl (1984) read *otruge*, a correction by Wilamowitz of *strugis* in M. This is preferable to the alternative reading *tiphe zeia* which Jones accepts since Galen explicitly says (1.13) that *zeia* is not mentioned in *Regimen II*.

Why are vegetables and fruit left until the end? The answer may not be that they are less regarded. *Regimen III* makes it clear that vegetables are a suitable food in summer and not in winter (because they are moist). If they are least regarded, Diocles appears to have redressed the balance with a monograph devoted to vegetables.

The order of the foods is not the same as in Galen, who claims that cereals and pulses, other plants and then foods derived from animals had by his time become the standard order. Too little survives of Diocles' *Matters of Health to Pleistarchus* to determine the order there. Also, by Galen's day, wheat had become the most important cereal in dietary texts. For our author, barley comes first, as do cattle rather than pork among animal products. These choices seem to reflect the dietary balance of the period as far as barley is concerned, influenced possibly by the religious importance of barley and cattle (the latter is not likely to have been the most heavily consumed meat).

It appears that the foods listed in *Regimen II* extend beyond the standard human diet. Galen, for example, dismisses those who eat dogs, and is scornful of horse- and camel-eating peoples. The animals listed suggest that the range of the diet is both that consumed by a healthy person and those with special qualities which doctors prescribed to the sick. Horses and dogs, then, we assume, were not part of the normal, healthy diet, but might be prescribed for those with special dietary needs. Such a division was probably made by Diphilus of Siphnos in his *Food for the Sick and for the Healthy*, which dates to the third century BC, if Athenaeus correctly links him with the court of Lysimachus (*Deipnosophistae* 2.51a). Foods were also divided by Galen into foods for his treatise *On the Powers of Foods* and drugs for his treatises on more powerful or unusual items of diet (such as *On the Mixtures and Powers of Simple Drugs*), which were only to be taken in the case of humoral and other imbalances. Galen also addresses the diet as it was consumed in Asia Minor, Greece and Italy, with comments on foods at the margin of the diet; the Hippocratic author appears not to be concerned to place his foods explicitly within the civilised order.

Nor does the Hippocratic author appear to be concerned by specific location. Geography plays a large part, but only as regards climate, season and the wetness or dryness of a place (56). The diet is placed within the natural rather than the polis-centred world, especially so if we read *Regimen II* in the light of *Regimen I*. Wines are thus identified

by type and not by place. Cereals are not listed by place. Galen by contrast identifies certain plants with certain places. For example, at 1.26 he writes, of grass peas or chickling vetch:

in substance grass peas are very like birds' peas and cowpeas, and once again, the countryfolk in our part of Asia, and especially in Mysia and Phrygia, use them in great quantity; not only as people in Alexandria and many other cities use birds' peas and cowpeas, but also preparing them like a lentil-ptisane. They have a liquor which is close to them in property, but thicker in consistency, and for this very reason they are somehow more nourishing. (trans. Powell)

He does this for several reasons. The driving reason is normally that it is difficult to identify a particular plant, such as *tiphe*, one of the primitive wheats (1.13). He thus tests it in the lexica and in the field. The Hippocratic author has no concerns of identification, even though he refers to primitive forms of wheat (see note 4) and special forms of bread (see note 6). We might suppose that this was a problem for Galen because he was living in the later Greek world under the Roman empire, and that a more complex world made larger demands. But Diocles also addresses this issue, for example in fr. 199, on a kind of carrot, in fr. 202, on Heracleot nuts, and in fr. 206a, on a name for marjoram. Such difficulties arise too in other texts of the fifth and fourth centuries, such as the comedies of Epicharmus or the *Life of Luxury* of Arcestratus.⁵ There seems to be a clear distinction between the Hippocratic author and all these other texts. For this author, the danger of confusion over foods and their terminology in the Aegean area appears not to be a concern. This is particularly noticeable in the names of birds and fish, which were numerous, varied and differed from city to city. But it applies also to cereals, fruits and vegetables.

A further area of distinction concerns the class of person eating this diet. The Greeks seem to have enjoyed a diet that was similar across all classes, with richer people eating better, often more refined, versions of what poorer people ate. So, all ate barley, normally mashed cake or *maza*, but wealthy people ate better forms.⁶ Nearly

⁵ See Olson and Sens on Arcestratus fr. 5.12–13.

⁶ Compare Arcestratos of Gela fr. 4. The finest barley flour of Lesbos is first choice, 'whiter than snow', followed by the flour of Thebes and Thasos. Much later in the list comes the wheat bread of Tegea, an *enkruptie*, or ash bread, which the Hippocratic author mentions in 2.42.

all ate meat and fish, but the rich ate these more often, and were more likely to eat expensive single fish rather than fish caught in numbers such as sardines and sprats. The list of fish named seems to include large fish such as breams and turbot, which appear to have been expensive, and other fish, such as shellfish and the *thrissa* (possibly a kind of sardine), which appear to have been less so. Lesser items of diet, such as *oroboi* or bitter vetch, are also included (45). This is a food which, according to Galen (1.29), is only fit for cattle except in times of famine, for which he alludes to a famine in Ainos mentioned in Hipp. *Epidemics* 2.4.3.⁷ Does the inclusion of *oroboi* in our list indicate that the diet explored is the diet of all citizens, or only that enjoyed by the rich? This is a difficult question to answer since *oroboi* were probably a constituent of many people's diet as a *pharmakon*, and are included in the list of *cholera* (foods which produce bile) in *Epidemics* 7.82 (see below). There are however other indications that the Hippocratic author is not writing for an exclusive audience. Later in 2.45, we are told, "roughly ground flour and husks of millet (*kenkroi*) are dry and arrest the stomach, while with figs they are strong for those who work". If we assume that *hoi poneontes* (those who work) are manual workers, then the treatise is addressed widely across the population, to include eaters of turbot (the rich?), eaters of foxes (country people?) and labourers who eat millet and figs. Social distinctions based on labour are also made in *Regimen III*.68 where the author declares,

I shall write in the first place for the majority of people, with details of how they may particularly benefit when they use the foods and drinks that they chance upon, labour which is essential, journeys on foot that are forced upon them, sea journeys for the acquiring of sustenance—people who are heated up contrary to what is suitable, cooled contrary to what is useful, and in general live a life that is not fixed.

Advice for this majority is given, and then summarised (69):

this is what I advise for the majority of people who perforce live out their life at random. It is not possible for them to disregard everything else and to care for their health.

⁷ "In Ainos, people who ate pulses continually in a famine, men and women, lost the power of their legs and continued to do so. But the vetch-eaters had knee complaints." (trans. Smith)

He then moves on to the rich man who can make health his top priority. While the rich man, who in Plato's but not our author's view, might be taking his health too seriously, the majority under consideration seem to have a comparatively leisurely life, access to wrestling and gymnastics, wheat bread and meat. This might not be the life of the majority of the demos.

When we compare this picture with what Galen proposes, a very clear perspective emerges. He mentions peasants, as we have seen. He is very alert to the seasonal shortages of foods in Mediterranean communities, particularly in the spring, and includes a number of grains classified normally as cattle food, but eaten by human beings in the countryside when hungry. He comments too on wet nurses, who are forced to eat wild plants to survive in spring and as a result infect their young charges with terrible sores. He also mentions a larger number of inferior cereals, beans and pulses and wild plants, again suggesting a wider cross-section of the population that those the Hippocratic author has in mind.

Galen seems to have felt the need to expand on his predecessors, for the sake of clarity and no doubt for other reasons. Galen comments on foxes, which are only mentioned in passing in *Regimen II*: 'amongst ourselves [in Mysia], huntsmen often eat the meat of foxes in the autumn, for they are being fattened by grapes' (3.1). This seems to be mere anecdotal expansion, but this is not generally the case.

Galen directs his treatise to Greek readers in the Roman Empire. By the second century AD, more plants were in common use than in the time of the Hippocratic author—peaches and apricots, for example. There was now a need to separate out the class of plants known as *seris*, which before had been known generically (*The Thinning Diet* 3). There was the problem of Greek terms in a Latin context. And a very long period of written Greek in which much confusion over terminology had arisen. This was particularly true of the lesser wheats, *olura*, *tiphe* and *zeia*. In order to identify these plants correctly, Galen interrogates the texts of Theophrastus, Diocles, Herodotus, Homer and Dioscorides. He also goes out into the field to discover what country people are growing and eating. We are thus given precise locations, in Thrace, in Macedonia, often in Galen's native Mysia. It seems likely that the geographical range of the Hippocratic author was narrower than this, but why is it not an issue at all? Where the Hippocratic author includes curiosities such as dogs and

horses, Galen includes weeds that are barely edible (*arakos/arachos* 1.27) and fruits that in his view should not be imported, such as jujubes and carobs (2.32–23). In these cases, he seems to include elements of the imperial diet because the foods were eaten, not because they have desirable medical qualities. I have discussed these working methods in a recent essay (Wilkins 2003). Galen makes clear that his addressees are the urban readers of antiquity (though not the imperial court in particular) who are different from manual labourers. He stresses this in a discussion of wheat breads made with cheese at country festivals (1.2). He discovers that country people have large appetites but diets that are often unsuitable for them. These peasants are distinguished from ‘us’, the readers.

Galen is also clear about the limits of the diet. Dogs and lions are outside it, snails inside. But he cannot, or at least does not attempt to, include everything. He has over sixty sections in the book on plants, but sixty is not enough. The Hippocratic author faced the same problem. He might have known, for example, about pepper (at least pepper was known to the author of *Epidemics* 7), but does not include it. We cannot fully determine why dogs are included but not pepper.

What was Galen’s justification for expanding so greatly on the Hippocratic list? In part he has more criteria, and is more concerned with variations in the humours. Humours and digestion remain central, and other conditions are not explored (cf the knee complaints in note 7), though some are listed at the beginning of *The Thinning Diet*. He also gives more attention to identification, as I set out above. Part of this process was to present his evidence in the form of case studies, to some extent in a way analogous to cases in the Hippocratic *Epidemics*. I give two examples. Galen reports the experiment of a medical student in Alexandria (1.25):

I know that a certain young man who practises the art of Medicine in Alexandria for four years every day used these alone as seasoning—I mean fenugreek, cowpeas, birds’ peas and lupins. Sometimes he also used oils from Memphis, vegetables and a few fruits that are eaten uncooked, for it has been his policy not even to light a fire. So, in all those years, this man has stayed healthy and maintained his bodily condition not a whit worse than it was at the outset. He ate them with fish sauce, that is to say sometimes adding oil alone to it, sometimes also wine, and on occasion also vinegar; but at other times, as with lupins, he ate them with salt alone. (trans. Powell)

A lengthy case study also appears in *Epidemics* 7.68:

Calligenes, when he was about twenty-five years, had a flow from the head (*katarrhous*). Much coughing brought up violently the matter that had flowed down. Nothing through the bowels. It persisted for four years. There were light fevers at the beginning. Hellebore did not help, but reducing food, yet fattening him. Eating bread. Wine, red. Meats, whichever he wanted. Refraining from acrid, salt, fat, juice of silphium, raw vegetables. Many walks. Drinking milk was of no benefit, but drinking, with mild wine, pure raw sesame, about one tenth of a pint. (trans. Smith. For the textual problems see Jouanna *ad loc.*)

In these two cases, Galen included the case study, the Hippocratic author resolutely excludes them. I give a further Hippocratic example, from *Epidemics* 7.82:

Choleric conditions, from meat-eating and especially undercooked pork, and from chickpeas and from fragrant old wine, exposure to the sun, and cuttlefish, from crayfish and lobsters, from eating garden vegetables, especially leeks and onions, and also boiled lettuce, cabbage, and undercooked dock, and from pastry and honey cakes, and fruit and ripe cucumber and wine with milk and vetches and fresh barley. Choleric conditions are more likely in summer, as also remittent fevers and those attended by shivering. (trans. Smith)

This is a case study which appears also in *Epidemics* 5.71 (see Jouanna *ad loc.*). In book seven, a general list of bile-producing foods is given, which in book five is attached to Bias the athlete. Case studies or anecdotes clearly were used in Hippocratic circles. We would like to know why this evidence was not attached to the section on pork, cuttlefish or vegetables in *Regimen II*. It seems that the Hippocratic text as we have it was at a stage where research data could be simply recorded and evidence was not needed to justify a position. Case studies do appear in *Regimen III*, to explore the balance between food and exercise. As far as the foods themselves were concerned, the data appears to have been considered to be at an advanced stage of understanding and to be broadly agreed. Where we compare what is said in *Regimen II* with an evidential base, such as in *Epidemics*, interesting differences and similarities emerge. It must also be said that where Galen does use much more extensive data and evidence, he does not often come up with a clearly different conclusion from the Hippocratic author.

We might compare, further, what is said of cheese in *Regimen II* with what is said in *Ancient Medicine*. Our author writes (2.51):

Cheese is strong, heating, nourishing and binding; it is strong because it is nearest to the creature's origin; it is nourishing because the fleshy part of the milk remains in it; it is heating because it is fat; binding because it is coagulated by fig juice or rennet. (trans. Jones)

In *Ancient Medicine* 20–21 we read:

Since this at least I think a physician must know, and be at pains to know, about natural science, if he is going to perform aught of his duty, what man is in relation to foods and drinks, and to habits generally, and what will be the effects on each individual. It is not sufficient to learn simply that cheese is a bad food, as it gives a pain to one who eats a surfeit of it; we must know what the pain is, the reasons for it, and which constituent of man is harmfully affected. For there are many other bad foods and bad drinks, which affect a man in different ways. . . . Cheese does not harm all men alike. Some can eat their fill of it without the slightest hurt, nay, those it agrees with are wonderfully strengthened thereby. Others come off badly. So the constitutions of these men differ, and the difference lies in the constituent of the body which is hostile to cheese, and is roused and stirred to action under its influence. Those in whom a humour of such a kind is present in greater quantity, and with greater control over the body, naturally suffer more severely. But if cheese were bad for the human constitution without exception, it would have hurt all. He who knows the above truths will not fall into the following errors. In convalescence from illness, and also in protracted illnesses, many disturbances occur, some spontaneously and some from things casually administered. I am aware that most physicians, like laymen, if the patient has done anything unusual near the day of the disturbance—taken a bath or a walk, or eaten strange food, these things being all beneficial—nevertheless assign the cause to one of them, and, while ignorant of the real cause, stop what may have been of the greatest value. (trans. Jones)

There is no serious contradiction between the two texts. *Ancient Medicine* identifies the dangers of cheese for some: it is left implicit in *Regimen II* that it is sufficient to list the qualities of a food, and to leave it as read that the food should not be given to a patient at risk from such qualities. Galen addresses the issue of patient susceptibility in his introductory chapter, and takes those doctors to task who consider only the qualities of the food and not the qualities of the humours in the patient.

Mushrooms provide a further case study in Galen and in *Epidemics* book seven. Galen reports a young man close to death (2.67). At *Epidemics* 7.102 we read a broadly similar account:

Pausanias' young daughter, when she ate a raw mushroom, had nausea, choking, pain in the stomach. Drinking warm melicrat and vomiting helped, and warm bathing. In the bath she vomited the mushroom and when she was about to recover she sweated.

There are no mushrooms in *Regimen II*.

Differences that can be identified between *Regimen II* and other Hippocratic texts or Galen's text may or may not be significant. Galen often takes his predecessors to task, but this is largely in the introductory chapter rather than in the lists of foods. Doctors who are found to be particularly in error with their categories are Praxagoras and Phylotimus, who like the doctors in error in *Ancient Medicine*, have not understood what they are looking at. Galen in fact rarely refers back to matters of detail in *Regimen II*: his main comment on the treatise, as we have seen, is textual rather than medical. For points of detail, Galen refers more often to the *Epidemics*.

There are undeclared discriminating principles in *Regimen II*. We have noted that fish are selected for their dryness. Is this to address a certain class of conditions, or for theoretical reasons? Why were other classes of fish excluded? It is not that fish are not considered in their habitat, since rock fish, pelagic fish and marsh fish are all considered. The short list may be one reason why Mnesitheus of Athens and Diphilus of Siphnos in the fourth and third centuries gave extensive details on fish (quoted by Athenaeus 8.355a–358d). All the later accounts, however, including Galen, appear to expand what the Hippocratic text offers, and do not take issue with its underlying principles.

A final perspective can be brought to bear with the help of *The Life of Luxury* of Archestratus of Gela, a parodic poem dating to the fourth century BC, and thus not far in date either from Diocles or the author of *Regimen II*. This poem was written within the Platonic tradition, in that it exploits Plato's castigation of luxury and reverses it, arguing for pleasure over justice and utility.⁸ Within the literary tradition, Archestratus offers a perspective on dining as a social occasion. The medical texts take this on, Diocles and Galen much more fully than the Hippocratic authors, though meal times are considered in *Regimen III*, and the combining of foods by cooks at *Regimen*

⁸ For cooking as the deceptive art of pleasure, contrasting with medicine as the useful art see Plato, *Gorgias* 518; for the problem of food and luxury in the ideal city see *Republic* 372.

I.18. Archestratus also gives detailed descriptions of fish, locates them in specific places, and addresses the problems of different terms in different cities, all variants that were a concern for Diocles and Galen, but apparently not for the Hippocratic author.

In conclusion, the later dietary works do show that there were issues that were not considered by the Hippocratic author. Later classifications required more detail, more awareness of terminology, place and regional variation, more explicit exploration of the physiological principles at work, and more use of the evidential base. All of these aspects may lie behind the composition of *Regimen II* and its fellow treatises but are not discernible in the finished version.

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THE HIPPOCRATIC IMPACT ON HEALING CULTS: THE ARCHAEOLOGICAL EVIDENCE IN ATTICA*

Maria Elena Gorrini

Summary

In this paper I will examine the nature of the relationship between Hippocratic medical concepts and the practices of healing sanctuaries within Attica. I will consider the evolution of medical practice in a religious context to the time of Hippocratic medicine, the parallel floruit of Hippocratic practice and healing cults, and the relations between religious and rational medicine in their relative contexts: the temple and the city up to the Roman period.¹ We will reassess the nature of the developing relationship between Hippocratic and religious medical practises, with particular focus on the presence of medical doctors within the healing sanctuaries.

THE HEALING PANTHEON BEFORE ASCLEPIUS: THE KATHARTAI

Prior to the spread of Hippocratic theories during the fifth century BCE the very idea of illness had clear moral connotations. Illness, and in particular epidemic disease,² was a *miasma*, a pollution derived from offending the gods.³ Even if a single person, or a single group of persons, were responsible for the offence, the guilt assailed the entire community⁴ and consequently the only possible cure was a

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¹ I make reference to Jouanna's elaboration of the three poles around whom the medical doctors acted in ancient Greece: the school, the temple and the city. See Jouanna (1997) 795 ff.

² In this paper I am concerned with the treatment of epidemics rather than individual conditions of injury or illness which were treated by doctors even before the development of Hippocratic medicine.

³ See Parker (1983) 207–256, for an ample review of examples. See also Horstmannshoff (1989) *passim*.

⁴ See again Parker (1983) 257–280.

collective purification. Healers were, therefore, called in by the city and appeared in the form of figures which we would call *kathartai*, purifiers,⁵ who performed purificatory rites rather than any therapeutic acts, to address the *miasma* experienced by the city-state. Such ritual proceedings are known in Attica through the actions of three *iatromanteis*, or medicine-men, Epimenides, Toxaris and Museus.

The figure of Epimenides is surrounded by many unanswered questions: his origin, epoch, actions and even his existence *per se* are uncertain. As the ancient testimonies relating to him have been collected by Jacoby⁶ and a comprehensive study of Epimenides has been published recently,⁷ we will simply highlight a few salient features of this Cretan purifier.

Epimenides, according to Diogenes Laërtius,⁸ Plutarch⁹ and Aristotle,¹⁰ was called to Athens to purify the city of the *miasma* of the Cylonian murder at the end of 7th c. BCE. He was from Crete, and either from Cnossos,¹¹ or from Festos.¹² In Athens, Epimenides carried out the famous purification of the city, and, after foretelling the disaster of Mounichia,¹³ returned to Crete with an olive branch. His purification comprised two stages and the combined action of an *exêgêtês* and of a *kathartês*. Firstly, he investigated the past in order to know the cause of the evil afflicting the city, and identified this cause as the Cylonian murder.¹⁴ Secondly, he performed a cathartic ritual, setting white and black sheep on the Areopagus and ordering the building of shrines on the places where each of them stopped.

⁵ Definition used by Parker (1983) 209.

⁶ *FGrHist* III, XXXVIII, 457.

⁷ *Epimenide cretese* 2001. See in particular Scarpi (2001) 25–35; Tortorelli Ghidini (2001) 53–76; Federico (2001) 77–128.

⁸ Diogenes Laërtius, *Lives and Opinions of Eminent Philosophers* 1, 109–112 114–115.

⁹ Plutarch, *Life of Solon* 12.

¹⁰ Aristotle, *Athenian Constitution* 1. The testimony of Plato, which has Epimenides arriving to Athens “ten years before the Persian wars” is isolated and unreliable. See Plato, *Laws* 1, 642 d. For an historical contextualisation of the “Spätdatierung” see Federico (2001) 102, notes 93–94. Epimenides’ purification is normally set in a period between 604/3–601/0 BCE (Suidas, s.v. *Epimenides*) and the 46th Olympiad (596/5–593/2 BCE: D.L. 1, 110). According to Plutarch the date coincides with Solon’s archonship, 594/3 BCE (Plu. *Sol.* 12, 8).

¹¹ Pl., *Leg.* 1, 642 a; D.L.1, 109; Pausanias, *Periegesis* 1.14.4.

¹² Plutarch, *The Obsolence of Oracles (De defectu oraculorum)* 409 e; *Solon* 12; Strabo, *Geography* 10.4.14. Based on his analysis of the sources Colli (1978) II, 267 supports the Cnossian tradition. See also Tortorelli Ghidini (2001) 55–56 with footnotes.

¹³ Plutarch, *Solon* 12; Diogenes Laërtius 1.114.

¹⁴ For a recent discussion of the Cylonian murder see Giuliani (1999) 21–43.

The central element of the purification was the foundation, or rather the re-consecration, of the sanctuary of the Erinyes on the Areopagus.¹⁵ This action highlights the fact that the pestilence had political origins:¹⁶ the *pollution* derived from the Athenians' collective responsibility for the Cylonian murder. Accordingly, the only possible salvation was the intervention of a just man, and evidently a non-Athenian. Epimenides of Crete then focused his attention on the *hieròn* of the Erinyes, goddesses of revenge, and on the Areopagus, the seat of the Athenian court of blood crimes, in order to rebuild the political order of a cursed city.

The only mention of Toxaris, the Scythian *xenos iatros*, is in Lucian's *The Scythian*¹⁷ where he appears in a dream to the wife of Architeles the Areopagite, and tells her that the Athenians would be released from the grip of the plague if they sprinkled their alley ways with wine. The date of this episode (the apparition occurred κατὰ τὸν λοιμὸν τὸν μέγαν) is uncertain, although Lucian says that Toxaris arrived in Greece "before Anacharsis",¹⁸ and that the two met. We may place Anacharsis in the sixth century BCE, since, according to Herodotus,¹⁹ he was the uncle of the Scythian king Idantirsus, from which it follows that Toxaris should have also lived in the sixth century BCE. The date of Toxaris' actions is very close²⁰ to the date of the actions of Epimenides, but whereas the latter purified the city through a proper cathartic ritual, the former seems rather to have performed a parody of purification. He used wine instead of water, and his appearance in a dream may be an ironic reference to the practice of incubation (or dream-therapy) in healing sanctuaries. With Toxaris the borders between fairy-tale, parody and history are

¹⁵ For a very good analysis of the rite, see Federico (2001) 112–114.

¹⁶ The purification constituted an act of political re-foundation, as it has been very well explained by Federico (2001) 118: "Epimenides contributed to the formation of a civic and sacred space, the Areopagus, whose foundation the Athenian tradition will recognise for ever as a decisive moment of the consolidation of the civic and democratic spirit and of the definitive overcoming of the aristocratic community."

¹⁷ Lucian, *The Scythian* 1–2.

¹⁸ Luc., *Scyth.* 1.

¹⁹ Herodotus, *Histories* 4.76–77.

²⁰ Epimenides' purification is normally dated to a period between 604/3–601/0 BCE (Suidas, s.v. *Epimenides*) and the 46th Olympiad (596/5–593/2 BCE: D.L. 1, 110). According to Plutarch the date coincides with the Solon's archonship, 594/3 BCE (Plu. *Sol.* 12, 8).

uncertain²¹ and, as a result, we cannot exclude the possibility that this *xenos iatros* was merely an invention of Lucian.²²

The third *iatromantis* is the pale figure of Museus. Known since the Peisistratid era,²³ he was credited with the ability to fly (a gift, according to the literary sources,²⁴ from Boreas) and to heal.²⁵ There are, however, no archaeological data which can attest to a cult of Museus,²⁶ and as the historical background surrounding his figure verges on the mythical he must remain a doubtful figure.²⁷

SACRED MEDICINE IN THE HIPPOCRATIC PERIOD: THE HEALING HEROES

Until the 5th century the *kathartai* with their purificatory rituals provided the only response to public illness. After the third quarter of the 5th century the epigraphical and archaeological evidence testifies to a changing situation: the spread of the Hippocratic concept of disease radically affected the perception of illness, and so the nature of its treatment within a religious context. In the following we will concentrate on the situation in Attica.

The Archaeological Evidence in Attica

The Attic healing sanctuaries arise during the second half of the fifth century BCE and we should stress the fact that their development is contemporary with the spread of Hippocratic medicine.

The *Asclepieum* of the Southern Slopes was erected in 420/19 BCE,²⁸ the *Amphiaraeum* of Oropus between 421 and 415 BCE;²⁹ and

²¹ See Camerotto (1998) 105–106, 199–213.

²² For a more detailed analysis of the figure and his relations with Epimenides see Gorrini a.

²³ Hdt. 7.6.

²⁴ Paus. 1.22.7.

²⁵ Aristophanes, *Frogs* (*Ranae*) 1033 et *scholia*.

²⁶ Paus. 1.22.7 refers to a picture depicting Museus among those guarded in the Pinacotheca on the Acropolis. Pausanias (1.25.8) also mentions a tomb of Museus on the hill of the Nymphs in front of the Acropolis.

²⁷ For a more detailed analysis of Museus and his relations with Apollo and the Muses, see Gorrini b (forthcoming).

²⁸ For the analysis of the foundation of the Athenian *Asclepieum*, see Beschi (1967–68) 381–463; Clinton (1994) 17–34.

²⁹ See Bearzot (1981) 80–100.

an analogous *Amphiaraeum* was founded in Rhamnus at the end of the fifth century BCE.³⁰ The dates of the foundation of the Athenian shrines of *hêrôs iatros*,³¹ of Amynus and of Pancrates-Palaemon oscillate between 400–350 BCE.³² The earliest document referring to a *hêrôs iatros* is an extremely fragmentary inscription from Eleusis³³ dated to 450–445 BCE. There are no specific attestations of healing cults in Attica prior to this date.³⁴ The only exception is represented by Hygieia.³⁵ It is well known that, from the sixth century BCE,³⁶ there was a cult devoted to Athena Hygieia on the Athenian Acropolis. This cult was dedicated to the main deity of Athens who had, among her powers, the ability to heal, but who was not exclusively a healing deity, as Hygieia will come to be, depriving Athena of one of her powers.³⁷

DIFFERENCES AND SIMILARITIES BETWEEN HEALING HEROES AND KATARTHAI

We may now turn to the shrines of the healing heroes—Asclepius, Amphiaraus, Pancrates and Palaemon, Amynus and *hêrôs iatros*. These figures are very different from the *katarthai* mentioned above, in terms of their status, their healing methods and their sphere of action.

Firstly, and in terms of status, the healing heroes are entirely mythical figures: they belong to a very remote past, and are sometimes related to gods or even become gods themselves (as in the cases of Asclepius and Amphiaraus). Furthermore, they are sometimes connected

³⁰ See Gorrini-Melfi (2002) 251–255.

³¹ See Travlos (1971) 573; Kearns (1989) 171.

³² The main study on Attica healing heroes is still Kutsch (1913). On Amynus see Connolly (1998) 1–21 with an analysis of the *status quaestionis*; for an archaeological approach, see Tölle Kastenbein (1994) 113 note 106. Pancrates: see Vikela (1994).

³³ *IG* I² 395.

³⁴ For a very detailed comprehensive account of Attic healing deities see Purday (1985) *passim*.

³⁵ Lechat (1899) s.v. *Hygieia* is still valid; more recently Croissant (1990) 554–555.

³⁶ Aleshire (1989) 12, reports all the documents about the cult of Athena Hygieia of the fifth c. BCE. On the archaeological evidence of the Acropolis shrine see Hurwit (1999) 15, 36, 221.

³⁷ The origins of Hygieia are still matter of discussion: see Croissant (1990) 554–555; Leventi (2003) 111–119.

with each other in order to build specific families, distinguished by healing, and even oracular,³⁸ powers.

Amphiaraus is grandson of the great healer Melampus,³⁹ his son Amphilocheus at his turn is a healing hero.⁴⁰ Podalirius and Machaon are Asclepius' sons,⁴¹ and Machaon's sons in their turn are healers in the Peloponnese.⁴² The *katarthai*, on the contrary, are more often considered isolated men who have been endowed with wonderful powers by the gods:⁴³ the ability to heal being one of these powers.

Secondly, and in terms of healing, their methods were drastically different. Whereas the *kathartai* purified with 'magical' enchantments and cathartic rituals, the priests of the healing heroes employed specific practises. Within their sanctuaries, the sick were instructed to follow very strict procedures in order to obey the sacred laws—laws which were in part, we shall suggest, medical prescriptions recalling Hippocratic methods.⁴⁴ For, when the god appeared in a dream to the patient, he either performed his miraculous, healing act at once or indicated the course the patient must follow upon waking to be cured. What he did not do was to suggest that a past offence against another god may have caused the disease.⁴⁵

Thirdly, and in terms of influence, whereas the *kathartai* acted within the public sphere, called upon, as they were, by the city to cure a collective illness, the healing heroes operated in a private

³⁸ On the strict connection between iatric and oracular power see Brelich (1958) 201–203. On the similarities between the prophecy of the soothsayer and the prognosis of the physician see Jouanna (1992) 100–103.

³⁹ The bibliography on Melampus is immense: here I quote only the most recent and most important studies: Dowden (1989) 74–87, 91–93, 140–142; Jost (1992) 173–184; Hoessly (2001), *passim*.

⁴⁰ He operates in Mallus, Oropus, Athens. Oropus: see Petrakos (1997) n. 280 e n. 345; Athens: *IG* II² 7175; Mallus: see Mc Kay (1990) 2113–16.

⁴¹ The tradition which considers the two brothers as the sons of Asclepius sons begins with Homer, *Iliad* 2.729–33; for the following sources and for their analysis see Edelstein (1945) 2–22; Solimano (1976) 9–40.

⁴² Alexenor in Titane: Pausanias 2.15.5; Sphyromachus in Argos: Paus. 2.23.4; Polemocrates in Eua: Paus. 2.38.4; Nicomachus and Gorgasus in Pherai: Paus. 4.30.3.

⁴³ Epimenides' gift comes from the Nymphs (or Zeus): Diogenes Laertius 1.115; Museus' gift from Apollo and the Northern Wind: Pausanias 1.22.7; 10.11.12.

⁴⁴ For similar conclusions, but concerning especially the bath-therapy, see Boudon (1994) 157–168.

⁴⁵ There are, however, some specific exceptions: the illnesses of those people who forgot to pay for their treatment, or to believe, in the Epidaurian god were indeed seen as a punishment for offending the divine: for examples see *IG* IV, 1, 121, VII (Echedorus).

sphere. The dedications, the anatomical *ex-votos* and the reliefs⁴⁶ depicting families in front of the hero or single patients cured by him, display an individual or, at most, a familiar dimension. Even if the same illness may affect many individuals, each afflicted individual is a unique, particular and specific case. Accordingly, the patient turns to the god in order to cure or treat himself or a member of his family, and not the entire community.

Illness or disease ceased to be regarded as the result of collective impiety, and the ill were consequently no longer seen as having offended the gods but rather as suffering from a particular and personal complaint that has to be cured through particular and specific treatments. This allows us to state that the parallel spread of Hippocratic medicine and rise of the healing heroes is not at all contradictory. Any apparent contradiction recedes when we observe that, whereas the *kathartai* resorted to magical incantations, the priests of the healing heroes used practices similar to those of the Hippocratics.

TEMPLE MEDICINE AND HIPPOCRATIC MEDICINE: A COMPARISON

Though Hippocratic medicine and temple-medicine clearly remained separate entities, there were some distinct points of convergence between the two: both in terms of methodology and literally in the sense of the occasions of their encounters.

The Methods

Both physicians and priests seem to have used similar dietetic methods. We may consider the evidence of Pausanias,⁴⁷ Philostratus⁴⁸ and the *lex sacra* concerning the worshippers/patients at the *Amphiaraium* of Oropus.⁴⁹

From these documents we learn that people who came to consult Amphiaraus had first to pay a tax at the entrance gate,⁵⁰ which they

⁴⁶ For an accurate analysis of the dedications offered in the healing sanctuaries see van Straten (1995) *passim*.

⁴⁷ Pausanias 1.34. 3.

⁴⁸ Philostratus, *The life of Apollonius of Tyana* 2.37.90.

⁴⁹ *IG* VII 325 = Sokolowski (1969) n. 69.

⁵⁰ See Petropoulou (1981) 39–63.

had to deposit in the *thēsauros*. After that, the worshipper/patient entered the sanctuary,⁵¹ and was submitted to the care of the priests, who prevented him from eating for one day or from drinking wine for three, so that he could receive the dream-like epiphany in a condition of extreme purity. He then had to pray and to sacrifice to the god. The central element in this act was the sacrifice of a ram, whose skin was used for the rite of the incubation: the worshipper/patient slept in the *enkoimeterion*, wound in the fleece of this animal, waiting for the visit of the god in a dream. Once recovered, the patient/worshipper would leave an *ex-voto* in the sanctuary.

These ritual abstentions recall the dietetic prescriptions recommended by the Hippocratics, as is demonstrated by reference to *The Sacred Disease*.⁵² Although the author of this treatise criticises the practitioners of irrational medicine, he has to concede⁵³ that in addition to their purifications and incantations, which rational medicine condemned, they prescribed dietary restrictions that rational medicine had to admit were sound. As Pigeaud⁵⁴ has said, rational doctors can accept the *regimen* imposed by irrational ones; what they cannot accept is that the temple practitioners are not ready to take responsibility for their actions. If the worshippers/patients die, they could always say that it is the gods' fault, whereas the medical doctors had to accept failure and responsibility.

Furthermore, Hippocratic doctors did not condemn prayers to the gods *per se*. This point can be established on the basis of two passages of the *Corpus Hippocraticum*. In *On the Sacred Disease*, the author criticises the 'charlatans' who believe in the divine origin of the epilepsy, reproaching them for purifying patients with blood as if they were criminals, whereas: "They should have brought them to the sanctuaries, with sacrifices and prayers, in supplication to the gods."⁵⁵

We may also note a passage in *Regimen* 4:⁵⁶

⁵¹ For an archaeological documentation of the "entrance-tickets" see Petrakos (1968) 126.

⁵² Hippocrates, *The Sacred Disease* (*De morbo sacro*) 2 (Loeb 2, 141–142; 6.354–356 L.).

⁵³ Jouanna (1992) 265.

⁵⁴ See Pigeaud (1996) 801–802.

⁵⁵ Hp., *De morbo sacro* 4, (Loeb II, 149; 6.362 L.). For a commentary on the passage see Jouanna (1992) 275–276.

⁵⁶ Hippocrates, *Regimen* 4 (*De victu* 4), 89 (Loeb 4, 437; 6.652, 19–21 L.).

Precautions must be taken, with change of regimen and prayers to the gods; in the case of good signs, to the Sun, to Zeus Ouranios, to Zeus Ktesios, to Athena Ktesia, to Hermes, to Apollo; in the case of adverse signs, to the Averters of the Evil, to Gê and to the heroes, that all dangers may be averted.⁵⁷

We may question why Asclepius is not included in this list. Surprisingly, he is also absent from another list, a Delphic oracle quoted by Demosthenes, dated not long before 348 BCE:

Concerning health, you have to sacrifice and to pray
To Zeus Hypatus, Heracles, Apollo Prostaterius.⁵⁸

This is not the place to analyse these single deities⁵⁹ in detail, but their well known connection with rites of purification, and with the protection of the city and of the individuals could possibly indicate that their area of action was more the prevention than the cure of disease. In fact, at the end of the above passage from *Regimen* 4 it is explicitly stated that “all dangers may be averted (by prayers to the gods)”.⁶⁰ Asclepius, then, may have been excluded in this list because he is responsible for curing rather than averting illness.

*The Meeting of Rational and Irrational Medicine:
Medical Doctors in the Temples*

The puzzling attitude of medical doctors towards temple medicine may be clarified by examining the inscriptions from the Athenian *Asclepieum* from the second half of the fourth century BCE onwards referring to *iatroi*.

Inscriptions 7, 9, 10, 11, 12 and 13 (see table) are especially relevant to our second point: the physical meeting of physicians and

⁵⁷ For other references to prayers in *Hippocratic Corpus* see Edelstein (1937) 239–240; Jouanna (1989) 3–22.

⁵⁸ Demosthenes, *Against Meidias* 52: περὶ υγιείας θύειν τε καὶ εὐχεσθαι, Διὶ ὑπάτῳ, Ἡρακλεῖ, Ἀπόλλωνι προσστατηρίῳ. For an excellent commentary on this oracle see Verbanck-Piérard (2000) 289 f., who however do not mention the Hippocratic text.

⁵⁹ Suffice it to say that some of these deities are included in *leges sacrae* concerning the *prothusiê* in the liturgical sacrifice to Asclepius: the Sun with Apollo and Hermes is mentioned in the *lex sacra* IG II–III² 4962 from Zea; Zeus in the valence of Apotropaios and Meilichios, together with Gê, appears in the *lex sacra von der Hallenstrasse* from Pergamum: Habicht (1969) 167–190. For the problem of the *prothusiai*, preliminary sacrifices in the rituals of the *Asclepieia*, see Petropoulou (1991).

⁶⁰ See n. 55 above.

priests inside the temple. Aleshire has noted the earliest dedication effected by a physician inside the *Asclepieum*.⁶¹ At line 116a of Inventory III (inscription N. 7), dated to 329/8 BCE, a physician's writing tablet is mentioned among the dedicated objects.

Although only two dedicants⁶² have been incontrovertibly identified as physicians, the nature and the number of other dedications may suggest that their dedicants were doctors (Callimachus of Thymaitadai⁶³ and Anticleides Cephisius⁶⁴ and Eucolus⁶⁵ and Melon).⁶⁶ As Aleshire has pointed out, the dedications of medical equipment, like cauterising implements,⁶⁷ *kylichnides*,⁶⁸ probes,⁶⁹ and cupping instruments⁷⁰ were made by doctors: "either at the time of retirement or as a thanks offering for a successful treatment."⁷¹ The fact that these physicians dedicated objects (as did their patients) inside the sanctuary demonstrates that even medical doctors were worshippers of Asclepius: which is perhaps not surprising given that the god was their official patron.

*IG II*² 483 (N. 9) is also significant: it is a *polis* decree in honour of Pheidias son of Apollonius of Rhodes, public physician, dated to 304/3 BCE, which was to have been set up in the *Asclepieum*. This inscription allows us to note an official bond between the physicians and the sanctuary through the *medium* of the city. We also know of the existence of an honorary statue erected in the *Asclepieum* (N. 7): the statue of Polycritus⁷² which could have been a representation, according to Aleshire,⁷³ of Polycritus of Mende, a physician of the early 4th c. BCE. The most significant decree is *IG II*² 772 (N. 12), dated to 252/1 BCE, which states that public physicians sacrificed

⁶¹ See Aleshire (1989) 126–165, Inv. III. 117.

⁶² See Aleshire (1989) 231 and 282. Inv. IV. 67 and V. 78. (table n. 11 and 13). See also table n. 10.

⁶³ See Aleshire (1989) 235: commentary on IV. 84: Callimachus dedicates a *kau-terion* (table n. 11).

⁶⁴ See Aleshire (1989) 332: commentary on Inv. V. 155: Anticleides dedicates a *kylichnis* and *mele* (table n. 13).

⁶⁵ See Aleshire (1989) 290: Inv. V. 161 (table n. 13).

⁶⁶ See Aleshire (1989) 280 and 328: Inv. V. 125 (table n. 13).

⁶⁷ See Aleshire (1989) 235: Inv. IV. 84 a (table n. 11).

⁶⁸ See Aleshire (1989) 332: Inv. V. 155 c (table n. 13). For the meaning of the word, see Milne (1939), 247–254.

⁶⁹ See Aleshire (1989) 290: Inv. V. 161 c (table n. 13).

⁷⁰ See Aleshire (1989) 138: Inv. III. 34 a (table n. 7).

⁷¹ See Aleshire (1989) 94.

⁷² On Polycritus see Hofstetter (1978) 157 n. 272, with an earlier bibliography.

⁷³ See Aleshire (1989) 156, commentary of Inv. III. 27.

twice yearly to Asclepius and Hygieia on behalf of themselves and the patients they had healed: again, we can note a peaceful coexistence of Hippocratic doctors and temple-priests.

Although we cannot determine any medical co-operation between doctors and the priests of Asclepius, we can at least state that medical doctors and priests met each other in sanctuaries. This does not mean, of course, that rational medicine was practised inside the temples, but it indicates two things: that medical doctors respected Asclepius among the healing deities; and that, on the other hand, rational medical practises may have been echoed in the temple healing practises, as a consequence of the intercourse of priests and medical doctors.⁷⁴

THE CRISIS OF RATIONAL MEDICINE AND THE RETURN TO THE TEMPLES

We may now move to consider the following, final, questions: why did Hippocratic medicine not eclipse temple-medicine? Were physicians involved with the religious method of healing disease? In order to answer the first question we should try to consider both categories in their proper context, i.e. the city.

From the inscriptions we learn clearly that rational medicine was available in Athens. Honorary decrees⁷⁵ attest to the presence of foreign physicians⁷⁶ who received citizenship or other honours for their services to the *polis*. The situation of medical doctors is better documented during the Roman period. From the late second century CE the ephebic catalogues include a physician.⁷⁷ This means that the importance of physicians had increased up to the point that they became necessary figures within the ephebic contexts (gymnasia, *palaestrae*, fortresses) beside the *paidotribai* and the other traditional teachers.

In addition, *IG* II² 3798 and *IG* II² 3799⁷⁸ dated to early 2nd CE are the clearest indication that physicians and priests worked side by

⁷⁴ See Boudon (1994) 159 and 165.

⁷⁵ See table N. 2, 8, 9, 16, 18.

⁷⁶ From cities including Argos Amphilochia (*IG* II² 374), Rhodes (*IG* II² 483), Pergamum (*IG* II² 946) and Sicyon (*IG* II² 9052).

⁷⁷ See table N. 24–30.

⁷⁸ See table Nos. 18 and 19.

side in the temple. The inscriptions honour respectively Sozon son of Ladicus of Sounion,⁷⁹ physician and *zachorus* of Asclepius and Hygieia at the same time, and Asylus Steyrieus,⁸⁰ physician and *zachorus* of Asclepius as well. The zachorate became a magistracy devoted (in part) to medical treatment for the suppliants at the sanctuary.⁸¹

Throughout the Roman period, too, temple medicine was clearly available if we consider the great number of sanctuaries still working in Athens and in Attica: the *Asclepieum*, the sanctuaries of Amphiaraus at Rhamnus and Oropus, the Athenian shrines of Pancrates and Amynus all have a Roman phase. Yet we may still question why it was that people chose temple medicine over rational medicine?

Firstly, the force of these cults consists in the individual relationship between worshipper/patient and healing hero. The central moment of the cult was the (dream)epiphany. Even if the divine epiphany was provoked by wisely administered drugs, or by the intrigues of the priests, the dream established a direct contact between worshipper/patient and healing hero, the purpose of which was to cure the faithful.

In particular, the temple physicians seem to flourish when rational medicine failed. The physicians themselves allow their patients to go to the temple:⁸² in the case of chronic diseases, of diseases stronger than the knowledge of the physicians, and, of course, in moments of serious danger, specifically plagues and other epidemics. At these times people sought refuge in the religious, hoping for a miracle. Accordingly, it is during the periods of plagues and epidemics that we find an increase of dedicatory inscriptions, as well as an amount of restoration work on the (above mentioned) sanctuaries themselves.

Although we have only briefly mentioned the Roman epoch, we should remember that the greatest revivals of healing cults are marked by the plagues which tormented the reigns of Marcus Aurelius⁸³ and Gallienus.⁸⁴ These times coincide with restoration works and peaks

⁷⁹ See Aleshire (1989) 59 (table n. 18).

⁸⁰ See Aleshire (1989) 87 (table n. 19).

⁸¹ See Aleshire (1989) 87 ff. See also Samama (2003) 124 n. 50.

⁸² Diodorus Siculus, *Fragments* 30, 43; Pliny, *Naturalis Historia* 30.98; Plutarch, *Concerning the face which appears in the orb of the Moon (De facie quae in orbe Lunae apparet)* 920 b; Plu., *Pericles* 38.

⁸³ See Duncan Jones (1996) 108–136.

⁸⁴ *Historia Augusta* 23, 5, 5: “cum illa pestis inauditae luxuriae impediretur malis”. Cyprian, *Ad Demetrianum* 3.

in the dedications at the Amphiaraium of Oropus, and at the sanctuary of Asclepius. This lends support to the hypothesis of Edelstein,⁸⁵ who regarded the treatments in the Asclepius' temples not as alternative medicine, but as the *extrema ratio* in case of failure of rational medicine. It is in fact not surprising to find revivals of healing cults even after centuries of Hippocratic practises because, as Parker said, temple medicine was, in fact, "a secular medicine . . . but with an injection of supernatural power."⁸⁶

CONCLUSIONS

In conclusion, we have moved from the first idea of illness, understood as pollution and treated through the purifications of the *kathartai*, to consider the spread of Hippocratic theories and the parallel rise of temple medicine. We then examined, noting the obvious differences, common points between Hippocratic doctors and temple-doctors. We also traced the parallel evolution of rational and irrational medicine, (noting the rise in Greek temple medicine at times of mass distress), and further noted that at a point in the Roman era they in fact work side by side in the temple.

We may conclude by observing the closeness of the relation between rational and irrational medicine as it arises at the beginning of the *Oath*:

I swear by Apollo Physician and by Asclepius and by Hygieia and by Panacea and by all the gods and the goddesses . . .⁸⁷

⁸⁵ See Edelstein (1931) 257.

⁸⁶ Parker (1983) 249 n. 36.

⁸⁷ Hp., *The Oath* (Loeb 1, 299; 4.628 L.). See the recent analysis by von Staden (1997) 157–195 with discussion. He analyses also another passage of the *Iusiurandum*, when the doctor says "And in a pure and holy way (ἀγνῶς καὶ ὁσίως) I shall guard my life and my *technē*" (Hp. *Iusi.* 4.630, 10–11 L.). He interprets it as a reference to the divinely sanctioned sphere of action of the medical doctors, as well as the prayer at the end of the *Oath*.

Table: Inscriptions concerning medical doctors⁸⁸ in Athens

Doc. No. ⁸⁹	Date ⁹⁰	Publication	Provenance of the document	Type of document	Description of the document	Physician's citizenship	Remarks
1	510/500 BCE circa	<i>IG</i> I ³ 1019 Samama (2003) no. 1	Attica, without further specification	Epitaph	Disk of 'Parian' marble	unknown	The man honoured, Aineas, could be identified with the great-uncle of Hippocrates ⁹¹
2	446/5–404/3 BCE	<i>IG</i> I ³ 164	Athens, possibly from the southern slopes of the Acropolis	Honorary decree	Two fragments of a stele	n/a	The decree is extremely fragmentary and apart from attesting to the existence of public doctors at Athens in the fifth c. provides no further information
3	Early 4th c. BCE	<i>IG</i> II–III ² 47 Samama no. 4	Piraeus	Inventory and decree	Slab of 'Pentelic' marble	n/a	At ll. 16–19 some medical equipment mentioned

⁸⁸

I have not considered the inscriptions mentioning midwives, *maiai*. See also Samama (2003) no. 8, 14, 15, 16, 20, 23.
⁸⁹ The consecutive listing of Documents Numbers is chronological, and since many of the inscriptions are dated only by century, the order of listing is frequently arbitrary.

⁹⁰ In some instances the dating of the inscriptions is a matter of dispute. I have generally given the most recent view.⁹¹ Phillips (1973) 184; Samama (2003) 109.

4	374 BCE circa	<i>IG</i> II/III ² (ed. minor) 1425 A	Once re- employed in the western part of the Parthenon	Inventory of the <i>quaestores</i> of Athena	Slab of 'Pentelic' marble	The inventory, at line 275, mentions the ivory handle of a μα[χαίρας] ἱερῆς
5	4th c. BCE	<i>SEG</i> XXII. 196 Samama (2003) no. 3	Athens, Ceramicus	Sepulchral poem in honour of Aristocrates	Marble stele with pediment	Aristocrates' father could be a Cypriot from Salamis ⁹²
6	330/22 BCE	<i>SEG</i> XXV. 180 Samama (2003) no. 5	Athens, Agora	Catalogue of silver <i>paterae</i>	Part of a fragmentary marble stele, Agora Inv. I 5656	Line 11 mentions an anonymous doctor who lives in Colarge and who devotes a <i>phiale</i>
7	329/8 BCE	Aleshire 1989, Inventory III	Athens, Asclepieum	Inventory	Intact stele of white marble with slight bluish cast	Line 116 mentions a writing tablet for physician (?)
8	After 319/18 BCE	<i>IG</i> II–III ² 374 Samama (2003) no. 6	Athens, acropolis	Proxeny decree	Fragmentary slab of 'Pentelic' marble	The physician Euenor, son of Euepius of Argos Amphilochia is also honoured in the decree <i>IG</i> II ² 372, dated to 322/1 BCE

⁹² Kudien (1986), especially 138 with bibliography; Samama (2003) 111.

Table (*cont.*)

Doc. No.	Date	Publication	Provenance of the document	Type of document	Description of the document	Physician's citizenship	Remarks
9	304/3 BCE	<i>IG</i> II–III ² 483 Samama (2003) no. 7	Athens, between the theatre of Dionysus and the Herodium	Proxeny decree	Slab of 'Pentelic' marble with pediment	Rhodes	The decree for Pheidias, son of Apollonius of Rhodes, physician, must have been set in the Asclepium
10	276/5 BCE (?)	<i>IG</i> II–III ² 1534 Samama (2003) no. 10	Athens, Southern slopes of the Acropolis	Inventory	Fragments of slabs of 'Imetian' marble	Athenian, from Melite	Line 44 mentions a δακτύλιος dedicated by Onetor, physician ⁹³
11	274/3 BCE	Aleshire 1989, Inventory IV	Athens, Asclepium	Inventory	Large slab of very light blue marble, of which thirty-two fragments have been identified. On Face A the present inventory is inscribed, on Face B there is Inscr. N. 13	Athenian	At line 67 is mentioned a doctor; at line 84 Callinarchus from Thymaitadai, an Attic deme, dedicates a <i>kauterion</i> , a cauterising implement.

⁹³ The name Onetor has been rejected by Aleshire (1989) 231.

12	252/1 BCE (Samama: 270/69 BCE)	<i>IG II–III²</i> 772 Samama (2003) no. 11	Athens, between the theatre of Dionysus and the Herodium	Public decree	Slab of ‘Pentelic’ marble with a pediment	n/a	It says that the public physicians have to sacrifice twice per year to Asclepius and Hygieia “for themselves and for the bodies of their patients”
13	244/3 BCE	Aleshire 1989, Inventory V Samama (2003) no. 9	Athens, Asclepium	Inventory	See description n. 11 (Face B)	Nicomachus is Athenian	Line 78 mentions Nicomachus <i>iaktos</i> who devotes 20 drachmas
14	Hellenistic	<i>SEG XXIX</i> . 227 Samama (2003) no. 13	Found at the intersection of Leophoros Vassilissis Sophias and Odós Panepistimiou, Athens	Epitaph	Pedimental stele	Crete	Sotades Cretan, physician
15	Early 2nd c. BCE (Samama: middle 3rd c. BCE)	<i>IG II–III²</i> 9052 Samama (2003) no. 12	Ceramicus, Athens	Epitaph	Stele of ‘Hymettian’ marble, very damaged	Sicyon	It belongs to the family’s grave of Philon, son of Philokrates of Sycion, physician

Table (*cont.*)

Doc. No.	Date	Publication	Provenance of the document	Type of document	Description of the document	Physician's citizenship	Remarks
16	166/5 BCE	<i>IG</i> II/III ² 946 (cd. minor)	Athens, Acropolis	Honorary decree	Pedimental slab of 'Hymettian' marble	Pergamum	The man honoured, Menandrus, is known as personal physician of Attalid king Eumenes II (Suidas, s.v. Leschides)
17	Early 1st c. CE	<i>IG</i> II–III ² 9719	Unknown	Grave-stele	Slab of 'Pentelic' marble with pediment and relief	Miletus	Callis is a medical doctor from Miletus
18	119/120 CE Samama: 98/9–103/4 BCE	<i>IG</i> II/III ² 3798 Samama (2003) no. 17	Athens, Asclepium	Honorary decree marble	Acéphalous Herm of 'Pentelic'	Sounion	It honours Sozon, son of Ladius of Sounion, physician and <i>zachorus</i> of Asclepius and Hygieia
19	128/9 CE	<i>IG</i> II–III ² 3799 Samama (2003) no. 18	Athens. Found near the Propylea, but likely from the Asclepium	Honorary inscription on a base	Base of 'Pentelic' marble	Steyria, Attic deme	Asylus, son of Zenon (?) of Steyria, was physician and <i>zachorus</i> of Asclepius

20	2nd c. CE	<i>IG</i> II/III ² (ed. minor) 3808	Athens, Asclepium	Uncertain	Fragment of 'Pentelic' marble	Unknown	The document mentions a physician named 'en'
21	Middle 2nd c. CE	<i>IG</i> II/III ² 4513 Samama (2003) no. 19	Athens	Votive stele	Stele of white marble with relief representing a physician with a patient	Achamai	The physician is a son of Theonnestus of Achamai
22	2nd c. CE	<i>IG</i> II/III ² 7810 Samama (2003) no. 21	Athens	Votive inscription?	Part of an epistyle of 'Pentelic' marble	Kollytai	Someone of the deme of Kollytai was a physician
23	Late 2nd c. CE (Samama: 1st–2nd c. CE)	<i>IG</i> II/III ² 7752 Samama (2003) no. 16	Athens, Ceramicus	Grave-stele	Stele of 'Pentelic' marble	Athenian	Dionysius, son of Eucarpus Phylasius, physician, bridegroom of Lyde, daughter of Soson of the Phalerus
24	230 CE ca.	<i>IG</i> II–III ² 2234 Samama (2003) 131 n. 70	Athens, near the church of S. Demetrius Catephoris	Catalogue of ephebes	Fragment of an Herm	Athenian	The physician Aurelius Artemisius is mentioned
25	230 CE ca.	<i>IG</i> II/III ² (ed. minor) 2236	Athens	Catalogue of ephebes	Fragment of slab of 'Pentelic' marble, preserved only in the right side	Athenian	The physician Aurelius Artemisius is mentioned

Table (cont.)

Doc. No.	Date	Publication	Provenance of the document	Type of document	Description of the document	Physician's citizenship	Remarks
26	230 CE ca.	<i>IG</i> II/III ² 2237	Athens, near the church of S. Demetrius Catephoris	Catalogue of ephebes	Slab of 'Pentelic' marble	Athenian	Line 32 mentions the physician Aurelius Artemisius
27	After 243 CE	<i>IG</i> II/III ² 2243	Athens, near the church of S. Demetrius Catephoris	Catalogue of ephebes	Slab of 'Pentelic' marble with pediment, composed by ten fragments, broken away at the right side	Athenian	Aurelius Artemisius is mentioned
28	3rd c. CE	<i>SEG</i> XXXIX. 189 = <i>IG</i> II ² 2235	Athens	Catalogue of ephebes	Fragments of two slabs of 'Pentelic' marble	Athenian	Aurelius Artemisius mentioned
29	Between 262/3 and 266/7 CE (Samama: 255–256 CE)	<i>IG</i> II/III ² 2245 Samama (2003) no. 24	Athens, near the church of S. Demetrius Catephoris	Catalogue of ephebes	Slab of 'Pentelic' marble with pediment, composed by many fragments	Athenian	Hermogenes, physician, is named at line 38
30	263/4 or 267/8 CE	<i>SEG</i> XXXIII. 158 Samama (2003) no. 25	Athens, Agora	Catalogue of ephebes	Ten fragments of grey marble pertinent to a stele	Athenian	Physician Iulianus Agathopous

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THE CITIES OF THE HIPPOCRATIC DOCTORS

Hui-hua Chang

Summary

This paper is a study of Greek cities in the northern Aegean, which were recorded in the Epidemics as places that Hippocratic doctors visited. The purpose is to determine how such places may help us to define the social and economic roles of Greek physicians in the late Classical period. As the historical sources will demonstrate, though lesser-known, these northern cities appear to have been large urban centres and trading posts, where labour division and specialisation were well developed and where wealthy clients resided. As craftsmen who were in constant need of profitable returns, the Hippocratic doctors were attracted to these locations due to the profitable patronage and employment opportunities they provided.

The Corpus provides historians with valuable information about Greek concepts of health and disease, common treatments of internal illness and injuries, medical theories on men, women and children, and preparations undertaken in order to become a physician—but it rarely reveals details about the lives of physicians. In this paper I will examine the known Greek cities which Hippocratic doctors visited in the Classical period in order to develop a historical background for their practices. Studying where the doctors went and why they went to those places will help us better to understand the Hippocratic physicians as people and what they wished to achieve in their careers. By examining the cities mentioned in the *Epidemics*, I hope to demonstrate that the Hippocratic doctors were not indiscriminating health practitioners who simply travelled from town to town or village to village at random, to cure sickness, but rather they visited these places for specific reasons: to seek employment and financial support. Most of the cities were large urban centres and many were trading posts where labour division and specialisation were well developed; they provided greater job opportunities and facilitated novel ideas, and were locations where wealth and wealthy

clients were concentrated. As a result, these cities attracted doctors to come to practice their art.

In the Hellespont and Thrace, the Hippocratic doctors visited Cyzicus, Perinthus, Cardia, Ainos, Abdera, Acanthus and Olynthus. They had stayed in Thasos, the island off Thrace, for several years. The doctors also went to Macedonia and Thessaly; they recorded cases in Pella, Crannon, Meliboea, Pherae, Pharsalus, and many in Larisa. Cities in other parts of Greece are also mentioned, such as Oeniadae on the western mainland, Elis in the Peloponnese, Delos, Salamis, Athens and Corinth.¹ The majority of the cities visited by the doctors were in Northern Greece.² Because the northern cities generally receive less study and attention, they will be the focus of this study. As I will show, most of them were major cities in the region, well populated and wealthy.

Located on the southwestern coast of the Sea of Marmara, Cyzicus was a Milesian colony and was visited by the author(s) of Book III of the *Epidemics* in the late fifth century BCE.³ The city sat on the isthmus of Arktonnesos and was on the trade route from the Black Sea to the Aegean. It was therefore a significant commercial centre from the beginning. Its coins were widely used in the Eastern Greek world from the sixth century BCE, and were a standard medium of international exchange when Xenophon led the expedition in the fourth century BCE. They bear witness to the city's trade connections to Ionia, Thrace, the Pontis, and even Sicily.⁴ Cyzicus had a large fertile territory; marble, wine, and saltfish were among its exports. However, its most important commercial activity was to supply the Aegean with wheat from the southern Russian plains, and

¹ The order of the cities discussed here is based on their geographic locations; this is not necessarily the chronological order in which the doctors visited them.

² Byl (1995) 225–235 points out that cities in Thessaly and in Thrace are those most frequently mentioned in the *Epidemics*.

³ For Milesian colonisation at Cyzicus see Strabo 14.4.6. Scholars are not certain about the date of the colonisation. Hasluck (1910) 163 accepted Eusebius' dating (*Chronicon* 2.81.87) of 756 BCE. Boardman (1999) 240–246 states that the eighth-century theory is, however, not supported by archaeological evidence, since the earliest material from the Propontis and pottery from Cyzicus are of the early seventh century. Isaac (1986) 198 adopts this view and dates the colonisation in the first quarter of the seventh century. For the dating of the *Epidemics* see Demand (1994) 39–42; also Jouanna (1999) 387–390.

⁴ Hasluck (1910) 171. Boardman (1999) 246 believes that the city exploited gold mines on the mainland to issue its electrum coins.

in return to provide manufactured goods to the Euxine.⁵ The wealth of Cyzicus is attested in the Athenian Tribute Lists, which show that it paid to the Delian fund nine talents from 442 to 440, in 438, 434, 432 and 431, and over eight talents in 429 and 428 BCE. Its tribute was the highest one assessed to a league member on the Asiatic shore of the Propontis.⁶ In 411 BCE Cyzicus, following Byzantium, tried to revolt against Athens. When Alcibiades led a navy fleet against the city, the people of Cyzicus offered a great deal of money so that he would not do harm to the city.⁷ Though the amount was not specified, it was probably very considerable, since at that time Alcibiades had difficulty collecting money from allies, due to the long drawn-out war and numerous other revolts against the empire.

Perinthus was a Samian foundation on the northern coast of the Sea of Marmara. Isaac called it 'the most successful of the settlements on the north shore of the Propontis'.⁸ The city paid ten talents to the Delian fund from 443 to 440, in 438, 434, 432 and 429 BCE—the highest amount on the list from the region of the Propontis, and second overall only to the average of fifteen talents from Byzantium.⁹ Perinthus was a trade city, but it also dominated a wide region inland which produced abundant corn, cattle, and timber. Olive oil from the southeastern coast of the Propontis was sold in Perinthus. When the Hippocratic doctors (books II and VI of the *Epidemics*) travelled to the northern Aegean in the first quarter of the fourth century BCE, the city was the major market place of the region. As Xenophon says, in the early 390's BCE, when Seuthes led the Greek mercenaries to raid villages on the Thracian coast and collected a booty of 1,000 captives, 2,000 cattle and 10,000 smaller animals, he dispatched Heracleides to Perinthus to sell the loot, in order to get money to pay his soldiers.¹⁰

⁵ Hasluck (1910) 170–171.

⁶ Meiggs (1972) 538–561. For the tribute payments made by the allies from 453–420 BCE, I have used the comprehensive chart created by Meiggs. For detailed information of the assessments of individual years see Meritt *et al.* (1939–1953).

⁷ Strabo 12.8.11; 14.4.6. Xenophon, *Hellenica* 1.1.20–22. For the revolt, see Diodorus Siculus 13.72.2; Xenophon, *Hellenica* 1.1.32.

⁸ Isaac (1986) 204.

⁹ Meiggs (1972) 538–561.

¹⁰ Xenophon, *Anabasis* 7.3.48–7.4.2.

The doctors also visited two Greek settlements on the Thracian coast between the straits of Thasos and the Chersonesus, Ainos and Abdera. May called these places 'outstandingly wealthy'. The sources of their prosperity were, as in the case of Cyzicus and Perinthus, derived from the natural wealth of their hinterlands and the excellent locations of their sites.¹¹

Ainos was located at the mouth of the river Hebros and had a good harbour. The Hebros was the major river in the north Aegean; though its mouth is choked up today, the river was easily navigable and the harbour was very accessible in antiquity.¹² Ainos was therefore at the gateway of the rich cornland and the timber-and-fruit producing region in eastern and central Thrace, today's Bulgarian plain. Not only did it serve as a middleman in the trade between the upper-and-middle Hebros and the Aegean, providing crops and slaves to the Greek world and Greek merchandise to central Thrace; Ainos also exported corn and fisheries from its rich territory.¹³ As early as the 470's BCE, the city had issued a steady series of coins as a result of its commercial expansion.¹⁴ Ainos was assessed twelve talents as tribute from 453 to 447; ten talents from 445 to 439, and the amount was increased to twenty talents in 425 BCE.¹⁵ Ainos

¹¹ May (1950) 3–7.

¹² May (1950) 3; Isaac (1986) 141.

¹³ May (1950) 5; Isaac (1986) 142–144. For a discussion of the Thracian slave trade see Isaac (1986) 145. Finley (1962, 52–53) assumes that all Thracian slaves came from the Black Sea region. Isaac, however, has provided evidence to show that Ainos exported Thracian slaves who were probably obtained from the hinterland or the coast near Ainos. For the fisheries from Ainos see Olson and Sens (2000): Archestratus, a mid-fourth-century gastronomist, recommended pig-fishes (Fr. 23.1) and large mussels (Fr. 7.1) from Ainos.

¹⁴ May (1950) 13. He suggests that a great number of small coins issued in the 450's BCE was for local circulation rather than for international trade, and that these coins indicate the prosperity of the port and the increasing number of people who conducted business in the city (p. 17).

¹⁵ Meiggs (1972) 538–561. Ainos was absent from the tribute lists from 438 to 428, except for 435 BCE—the year it paid only four talents. May (1950) 73 has summarised the scholarly debate on the reduction and interruption of the tribute at Ainos. Casson (1926) 200–201, argues that the Odrysian Kingdom in Thrace had established its control across the trade route to the interior, which would have led to the virtual economic extinction of Ainos. Strack (1912) 133 suggests that a diversion of trade from Ainos to the Pontis, in addition to the Odrysian control over the hinterland, contributed to the decline. However, Isaac (1986) 151–156 doubts that the Odrysians would have blocked the trade route and deprived Ainos, which was an outlet for their products, since they benefited from the commerce. May (1950) 79–87, recognising the vigorous revival of Ainos' coinage around 435

enjoyed constant prosperity throughout the fifth century BCE, and, though an ally to Athens, the Athenian disaster in Sicily did little harm to its economy. A large series of coins belonging to the years after 417/416 BCE demonstrates a period of heightened prosperity at Ainos; after the fall of Athens in 404 BCE, Ainos adopted the Chian weight and directed its overseas trade towards the coasts of Ionia and Rhodes. Not until 375 BCE did Ainos show signs of depression through a steady decline in the volume of its coinage.¹⁶ When the Hippocratic doctors travelled to the city in the first quarter of the fourth century, what they witnessed was an active commercial city which had been flourishing for almost a century.¹⁷

Abdera, on the other hand, did not have a good harbour. Nonetheless, it sat on a fertile and heavily cultivated coastal plain, and on the shortest land route connecting the Aegean to the Danube.¹⁸ Corn and fish were among its exports, but the most important one was its silver. May argues that, as early as the mid-sixth century BCE, Abdera had successfully risen to become an emporium for the silver trade, and its silver was directed towards the East and the Egyptian markets.¹⁹ Benefiting from the fall of Thasos, Abdera's long-

BCE, argues against economic depression and the impoverishment of the city. Rather, he suggests that the absence of Ainos from the list may have been a result of the establishment of an Athenian garrison in the city, and that Ainos paid directly to the commander and was in charge of maintaining the troops. If there was an economic decline in Ainos, it would be hard to explain why the city was assessed twenty talents in 425 BCE.

¹⁶ May (1950) 96–97, 183–194. Ainos' condition was made worse by the hostile relations between Athens and the new Odrysian ruler, Kotys, in the 360's BCE.

¹⁷ Grmek (1989) 222 translates a passage in book 2 of the *Epidemics* (4.3, which is repeated at 6.4.11) thus: "At Ainos, in the course of a famine, those who ate pulse continuously became powerless in the lower limbs; the condition lasted; and moreover, those who ate bitter vetch had pain in their knees". He attributes Littré's silence about the famine to a transcription error and a misreading of the corrupted text. However, May's study of the coinage (1950) 177–183 shows no sign of severe economic collapse at Ainos during the twenty-five years following 404 BCE. The facing Hermes head was introduced at the turn of the century, and the artistic work reached a high level in both the large and the small coins. Though the coinage reflected a slightly lower level of prosperity in the city between 387 and 375 BCE, the mint continued without interruption, and the standards of art remained high. Diodorus mentions that a famine in 375 BCE drove a barbarian tribe in Western Thrace to invade Abdera (15.36.1–4), but no famine is recorded to have ravaged Greek cities on the coast. If there was indeed a famine at Ainos during the first quarter of the fourth century BCE, it would probably have been localised, short-lived, and it would hardly have affected the entire city.

¹⁸ May (1966) 1–4; Isaac (1986) 73–75.

¹⁹ May (1966) 2. Abderite coins have been found at Ras Shamra, Persepolis and

time rival in the silver trade, the wealth of the city increased tremendously after 463 BCE, and from 453 to 425 Abdera paid twelve talents or more as tribute at each collection, save in 431 and 429 BCE, when the amount dropped down to ten only.²⁰ Though May suggests that its economy slightly declined in the last quarter of the fifth century (as a result of unstable international politics, the rise of a new trade competitor—Maroneia—and the recovery of Thasos), Abdera's silver trade continued. Furthermore, its local coastal commerce seems to have been prosperous during these years, as well as in the first decades of the fourth century; this assumption is supported by finds of abundant small coins dated to this period, which were issued to facilitate local trade.²¹ The city was invaded by a Thracian barbarian tribe in 375 BCE, but was saved by an Athenian squadron. With all of these troubles at home, Abdera was still able to keep the mint going, until the city was absorbed by Macedonia in the mid-fourth century. All of this indicates a strong economic foundation at Abdera.²²

The Hippocratic doctors stayed in Thasos for an extensive period of time, and this city became the background of book I and a great part of book III of the *Epidemics*. The city of Thasos, founded by Paros in the early seventh century on the northeastern tip of the island, was the capital of the state and a major political, commercial, and cultural centre in Thrace.²³ Thasos consisted of the island and its property on the mainland across the strait. The island was

Aleppo. However, very few Abderite coins struck after 480 BCE were found in the territories under Persian rule, as Raven (1967) 297 points out. Isaac (1986) 92–94 suggests that Abdera's silver trade was redirected to the Greek world, for example Samos, in the fifth century BCE.

²⁰ Isaac (1986) 87–95; Meiggs (1972) 538–561.

²¹ May (1966) 150–151, 177–185. Abdera was also known for its cuttlefish and grey mullet—two seafood delicacies. See Olson and Sens (2000), Frs. 56 and 44 Archestratus.

²² For the connection between coinage and wealth in Cyzicus, Ainos and Abdera see Nixon and Price (1990) 137–170. Nixon and Price argue that a correlation exists between coinage and the levels of tribute payments made by the allies of Athens: most of the big spenders (sixty-seven per cent) issued their own coinage regularly, while the little spenders made only scanty issues of low value. Though resources did not necessitate coinage—for example the big spender Byzantium did not mint its own coins—coinage did imply local resources, which were used as the basis for tribute assessments and included products from both the land and the sea, metals, taxes on markets and harbours, etc. (*id.*, pp. 148–149, 156–158).

²³ Lazaridis (1971) 33–35.

rich in vineyards and fish, and the mainland was well-known for its gold and silver mines. Thasos exploited the mines by means of its colonies, and had enjoyed great prosperity since the Archaic period. Herodotus says that the gold mines on the mainland yielded eighty talents each year; these mines, added to the silver mines on the island and to revenues from the colonies, brought 200 talents annually to Thasos (Herodotus vi 46–48). Although this number may be exaggerated, there is no doubt that Thasos was very wealthy. It had close trade relations with the Thracian tribes along the coast, the Eastern Mediterranean (Syria, Phoenicia, and Egypt), Asia Minor, Central Europe, the Danube region and Sicily.²⁴ Though its economy suffered when Athens took over its gold mines and colonies on the mainland in 463 BCE, it soon recovered. The Tribute Lists show that Thasos paid thirty talents to the fund in 443, 439 and 434–428, and sixty talents in 425 BCE. Meiggs believes that after 463 BCE the economy of Thasos largely depended on the export of its famous wine.²⁵ Thasian wine was considered the finest in Greece—sweet and fragrant—and in Athens it was a luxury item.²⁶ Standard Thracian amphorae used to transport wine were found in the Black Sea, the Delta of the Nile, Asia Minor, the Adriatic and Italy.²⁷ After the Peloponnesian War, Thasos concentrated its commercial activities in the areas of the Balkans, the Black Sea, and Central Europe, and founded its last colony (another trade post), Crenides, on the mainland coast in 361 BCE. The prosperity of Thasos was affected several times in the fifth century BCE due to political fluctuations in the Aegean, but the city continued to be an important and flourishing political, religious, and commercial centre all the way down to the Roman period.

Olynthus was the largest city in the Chalcidice in the early fourth century BCE. In 383 BCE an ambassador from Acanthus, while addressing the Spartans, called Olynthus ‘a great power not only by land but also by sea, because the country itself possesses ship timber and has revenues from many ports and many trading places, and likewise an abundant population on account of the abundance

²⁴ Lazaridis (1971) 24.

²⁵ Meiggs (1972) 572–574.

²⁶ Ar. *Ecclesiazusae* 1118–1122; Xenophon, *Symposium* 4.41; Olson and Sens (2000), Fr. 59.15–16 Archestratus.

²⁷ Lazaridis (1971) 38–41.

of food'.²⁸ At that time Olynthus was also in control of many Macedonian cities (including Pella), Pallene, and the neighbouring Thracian cities, as the leader of the Chalcidic League. Because it was the dominating power in this region and an ally to Athens and Thebes, Philip II destroyed the city completely, to eliminate it as a threat to his rule in 348 BCE.²⁹ The land around Olynthus was very fertile, producing wheat, olives, grapes, and beans; from Xenophon's testimony above we also know that the region was rich in timber. Before 432 BCE Olynthus was only a small participant on the Tribute Lists, contributing two talents to the fund. However, in 432 BCE a number of Chalcidic cities, instigated by the Macedonian king Perdiccas, rebelled against Athens; their people moved inland and formed a fortified city at Olynthus.³⁰ This act of synoecism greatly expanded the city and its population. Cahill called it 'the most critical single event in the urban history of Olynthus'.³¹ The residents of the city pursued farming, trade, and industry. Archaeologists have found workshops, retail shops and equipment for industry in many households. Some evidence points to manufacturing on a large scale, possibly by the employment of slave labour, for sale on the market.³² Coins found in the houses around the agora also show a trade connection between Olynthus and cities throughout the Greek world, as one quarter to one third of them were minted at foreign mints.³³ The Hippocratic doctors went to Olynthus before its destruction at the hands of the Macedonians. At that time the city was well populated, wealthy, and powerful.

Many places visited by the doctors were in Thessaly. Although Thessaly developed rather late, several of its cities grew rapidly in the fifth and the fourth centuries. This region soon drew a lot of attention from the central Greek world on account of its fertile land and strategic location, which enabled passage from the northern countries such as Macedonia to the Greek mainland.³⁴ In the mid-

²⁸ Xenophon, *Hellenica* 5.2.16 (trans. C.L. Brownson, Loeb Classical Library).

²⁹ For the Macedonian expansion and the Olynthian War see Hammond and Griffith (1979) 296–328.

³⁰ Thucydides 1.58. Also see Gude (1933) 10–11.

³¹ Cahill (2002) 35–38, 44.

³² *Id.* 224–225, 250–252, 263–265.

³³ *Id.* 273.

³⁴ Westlake (1935) 4–8, 31–39.

fourth century BCE, Isocrates called the Thessalians the most prosperous of the Greeks. Gorgias, the famous sophist, travelled there and spent a long time among the people, surely collecting fees from rich followers for his lessons.³⁵

Pherae was one of the few Thessalian cities which were close to the sea; its harbour was Pagasae. The location gave the city control over the maritime trade for the export of Thessalian corn and the import of manufactured goods from the outside world. The land around Pherae was not particularly suitable for cultivation, but the city was enriched by serving as a centre of the corn trade. The ears of corn on its coinage may have symbolised the export trade by Pheraean merchants (who purchased crops from other districts in the region) rather than the city's own corn production.³⁶ The trade became especially profitable when the demand for crops in the central Greek states soared after the destruction caused by the Peloponnesian War. Wealth from trade was possibly the basis on which the Pheraean tyrants, Lycophron and Jason, rose to power, since it enabled them to pay their mercenaries.³⁷ By 370 BCE, Pherae had become the master of all the large cities in Thessaly under Jason's reign.³⁸

A great number of the cases in book V of the *Epidemics* are recorded in Larisa, the most important city and the primary rival of Pherae in Thessaly. Larisa dominated a wide area of fertile land, which was the source of its wealth, and it held the mountain passes to Macedonia.³⁹ Aristocratic families, a privileged class from which the city's officials came, controlled the wealth of the city, and the leading family was the Aleuadae, who ruled Larisa down to the early fourth century BCE.⁴⁰ After Philip and Alexander rose to power, Larisa remained Macedonia's closest ally, which assured Larisa its place as the strongest Thessalian city. Its long-lasting prosperity is

³⁵ Isocrates 15.155. Westlake (1935) 4, 40–41. For the best land, also see Thucydides 1.2.

³⁶ Westlake (1935) 9–11, 48.

³⁷ *Id.* 48–51. Thessalian corn was exported to the south; see Xenophon, *Hellenica* 5.4.56; 6.1.11. For Lycophron's tyranny in 404 BCE see Xenophon, *Hellenica* 2.3–4. Jason supplied corn to Thebes, see Xenophon, *Hellenica* 4.4.56–57. For Jason's tyranny, see Xenophon, *Hellenica* 6.1.5.

³⁸ Westlake (1935) 70–72.

³⁹ *Id.* 9, 18–19.

⁴⁰ *Id.* 35–36.

attested by her fine and prolific silver coins, which were the chief currency in Thessaly until the Hellenistic period.⁴¹

Pharsalus held a key position in southern Thessaly, as it commanded the road from Thermopylae to Larisa in the north. Its importance in the 370's BCE is seen in the fact that both Sparta and Jason of Pherae were eager to make an alliance with the city.⁴² The territory of Pharsalus was fertile, producing corn, and was suitable for horse-breeding. The wealth of the city supported the famous Pharsalian cavalry. Backed up by the Macedonians, Pharsalus grew enough to challenge the leadership of Larisa in Thessaly by the mid-fourth century.⁴³

URBAN CENTRES AND SPECIALISATION

As we have seen, the majority of the places that the Hippocratic doctors visited were either wealthy commercial centres or leading cities in the region. The doctors may well have deliberately selected these cities for practising medicine because employment and patronage were open for them there. A large population and labour division allowed for the development of various crafts, trades, and services; and specialisation in urban centres provided each profession with better job opportunities.

The Athenian writer Xenophon confirms specialisation in the big cities, where various arts and crafts were developed to superior excellence. Here, each member in the community could attend to his own affairs and thus was able to be more efficient at one task:

For in small towns the same workman makes chairs and doors and plows and tables, and often this same artisan builds houses, and even so he is thankful if he can only find employment enough to support him. And it is, of course, impossible for a man of many trades to be proficient in all of them. In large cities, on the other hand, inasmuch as many people have demands to make upon each branch of industry, one trade alone, and very often even less than a whole trade, is

⁴¹ Hammond (1989) 185; Martin (1985) 45–46, 49–52. Other Thessalian cities which the doctors visited also minted their own coins—Pherae, Pharsalus, Meliboea, and Crannon—though their coins became rare in the fourth century BCE: *id.* 36–39, 47.

⁴² Westlake (1935) 76–81.

⁴³ *Id.* 11–13, 186–190.

enough to support a man: one man, for instance, makes shoes for men, and another for women; and there are places even where one man earns a living by only stitching shoes, another by cutting them out, another by sewing the uppers together, while there is another who performs none of these operations but only assembles the parts. It follows, therefore, as a matter of course, that he who devotes himself to a very highly specialised line of work is bound to do it in the best possible manner.⁴⁴

Xenophon also portrays a prosperous urban centre in which industrial and commercial activities prevail: shipowners and merchants crowd the streets, as do 'those rich in corn and wine and oil and cattle, men who possess of brains and money to invest, craftsmen and professors and philosophers, poets and the people who make use of their works, visitors who are drawn from all over the world, and men and women adorned with luxuries'.⁴⁵

This passage is echoed in Plato's *Republic* (369 c–373 d). Socrates states that the creator of a city is 'need' (*chreia*). In the economy of a small, simplified village, farmers, builders, weavers and cobblers are the major components. When the community enlarges, diversified crafts and professions appear: carpenters, smiths, armament suppliers, and herdsmen. Growing larger still, a city without imports becomes practically impossible. To operate properly the exchange system of buying and selling, the city will require more population (to produce and to consume), officials to regularise exports and imports and to supervise the market place, and maritime merchants to carry out long-distance trade; currency, shopkeepers, and wage earners are also essential for daily transactions in the market place. When a city reaches the level of luxurious living, the trades and services provided would go beyond the requirements for basic survival needs, to accommodate comfort and pleasure more suitably. Entertainers and those who contribute to the comforts of life are a necessity: poets and their assistants, rhapsodists, actors, chorus singers, dancers, contractors and theatrical managers, manufacturers of luxurious items such as jewellery and expensive furniture, and professionals who provide a multitude of services such as tutors, wet nurses, beauty—shop ladies, barbers, cooks and chefs are all required. It is in such a metropolis

⁴⁴ *Cyropaedia* 8.2.5. Trans. W. Miller, Loeb Classical Library.

⁴⁵ Xenophon, *Oeconomicus* 4.8; 5.1–4.

that the services of doctors become especially necessary, in Plato's opinion.⁴⁶

If we examine the site of Thasos, we will find that it fits perfectly the image of the metropolis portrayed in the *Republic*. Extensive building projects began in the capital as early as the end of the eighth century and continued for several centuries. They demonstrate the prosperity of the city. During the archaic period Thasos constructed the sanctuaries of Heracles, Poliouchos Athena, Pythios Apollo and Artemis; both of the harbours (the 'Closed Harbour' for naval use and, to the north, the open harbour, also called the 'trade harbour'); and the city walls. The residential town plan in the 'Northern Quarter' was also developed at that time. During the classical period the 'Northern Quarter' was remodelled. The city then built the new temple of Poliouchos Athena, sanctuaries of Dionysos, Poseidon, and Pan, the 'Passageway of the *theoroi*' and the theatre. The agora and the administration centre—called the 'building with *paraskenia*' (where the highest archons sat)—were also built then.⁴⁷

The building projects of Thasos and its well established commercial activities—exports of wine, timber, marble and silver—suggest labour division and a variety of occupations carried out by its people: farming, quarrying, mining, crafts, building and trading. Lazaridis believes that a large merchant fleet existed there, based on the large scale of maritime trade the city engaged in.⁴⁸ Though the population of Thasos can not be estimated accurately, the ability of the city to maintain a navy demonstrates an ample supply of manpower. Among the members of the Delian League, Thasos was one which originally contributed ships.⁴⁹ The heart of the city, the agora, was

⁴⁶ Logically, the demand for doctors is in proportion to the population in a given community; more people mean more patients and, as a result, more doctors. Plato regards a big city as unhealthy, and sees the need for physicians as a sign of the unhealthy style of living, both for body and for mind, in a large luxurious city (*Republic* 372 e). His idea does not need to be treated entirely as a doctrine of morality. From the point of view of physiology, a city which is cluttered, has a large population, and customarily trades with foreign lands facilitates the import and spread of epidemic diseases. The plague in Athens is an example.

⁴⁷ For the city plans in different periods see Lazaridis (1971) 63–73.

⁴⁸ Lazaridis (1971) 23, 34, 41; Meiggs (1972) 84.

⁴⁹ Meiggs (1972) 63. At the time of the Persian Wars, the Great King Darius ordered Thasos to bring their fleet across to Abdera, to prevent a Thasian revolt: Hdt. 6.46. Again, in 463 BCE, after their defeat, the Thasians were forced to surrender their fleet to Athens and had to pay an annual tribute instead for the future: Meiggs (1972) 85.

where daily commercial transactions took place, and was filled with venders and customers. Archaeologists have found many shops around it. Among the commodities was a great volume of luxury items: ivory trinkets, multicoloured glass vases, fine pottery, and, as Plato describes, jewellery and women's adornments made of gold, ivory and bronze, imported from Syria, Rhodes, Chios, the Cyclades, Athens and Corinth.⁵⁰ Chefs and cooks must have been warmly welcomed there as well, since Thasos produced gourmet seafood such as bullheads (or sculpin), red mullets, and the best octopus for fine cuisine.⁵¹ The city also attracted physicians, among them the Hippocratic doctors, to come to practice their art.⁵²

Urban life was associated with freedom from peasant toil and with free time to devote to luxuries, education, and travel; the busy traffic of traders and merchants also facilitated and attracted a host of novel and radical ideas. The cities on the northern coast and the Propontis were international trading posts with a widely mixed population; those in the Chalcidice, Macedonia and Thessaly were dominating cities ruled by a wealthy upper class, the members of which were eager to appear to be liberal, intellectual, and enlightened. By the classical period, the Hippocratic doctors had adopted rational medical theories. It was in such places as those described above, where wealth was concentrated and people with open minds resided, that they would find clients and patrons who were ready to accept untraditional ideas and who would support the art of the Hippocratic doctors.

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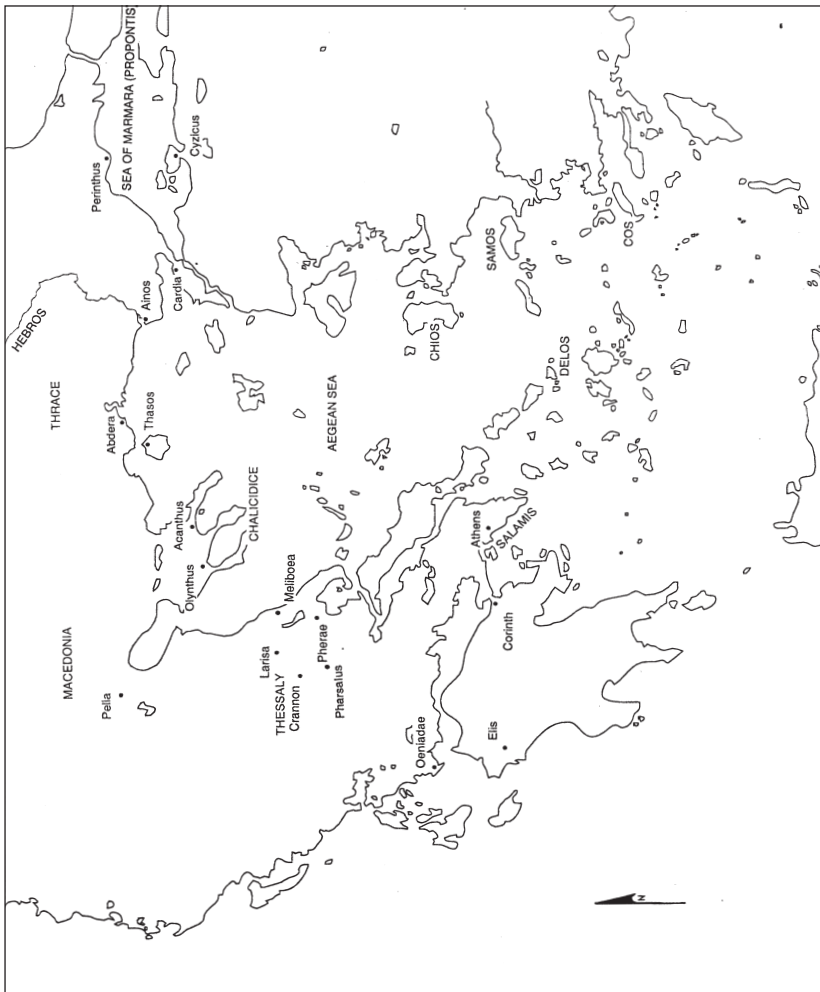
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⁵⁰ Lazaridis (1971) 49.

⁵¹ Olson and Sens (2000), Fr. 30.1, 42.4 and 54.1 Arcestratus.

⁵² Passages from the *Epidemics* identify locations of the dwellings of patients whom the Hippocratic doctors visited and attest several of the temples and public buildings in the city: the temple of Heracles (*Epid.* 1.21 = 2.666,3 L; 1 case 6 = 2.698,6 L; *Epid.* 3 case 3 = 3.112,13 L), the temple of Dionysus (*Epid.* 1.21 = 2.666,7 L), the temple of Hera (*Epid.* 1 case 14 = 2.716,4 L), the temple of Artemis (*Epid.* 3 case 1 = 2.102,11 L), and the theatre (2.660,8 L).

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ERROR, LOSS, AND CHANGE IN THE GENERATION OF THERAPIES¹

Julie Laskaris

Summary

Hippocratic therapies employing animal excrement are gender-specific, appearing almost exclusively in the gynaecological treatises, and reflecting Greek conceptions of women, as von Staden observed. These texts also contain the only early references to the use, likewise by women only, of another symbolic substance—human milk. Both therapies are recommended for both sexes in works that arise in Roman contexts. This paper argues that both therapies reflect a misunderstanding of magico-religious ritual under circumstances that may also account for their early gender-specificity. Different conceptions of gender account for their application to both sexes in later texts.

Greek medical therapies employing substances associated with ritual pollution and purification, such as animal excrement, sulphur, and asphalt, have aroused interest because the most polluting of such substances, the excrement, was recommended in the Hippocratic gynaecological texts exclusively for the cathartic treatment of women, as Heinrich von Staden was the first to notice.² The medical use of excrement coheres with the culture's general tendency to characterize

¹ This paper has been helped immeasurably by the generous advice of Larissa Bonfante, Christopher Faraone, Ann Hanson, Robert Ritner, and Heinrich von Staden. Any errors that remain despite their efforts are, of course, entirely my responsibility.

² Von Staden (1992). As von Staden informs us, the Hippocratic gynaecological texts are our source for all early references to the Greeks' therapeutic use of animal dung with one exception—*On Places in Man* (*De locis in homine*) 47.8 (p. 78.24–27 Joly; 6.346.17–19 L)—where, significantly, it is recommended for “women's diseases,” (1992) 12.

³ Von Staden (1992); cf. Carson (1990) 135–169. For a critique of this view of excrement therapy, see Hanson (1998) 87–93. Cathartic therapies are common in traditional medicines when there is an aetiology of intrusion, including ritual pollution, Johns (1990) 270.

women as sources of pollution,³ especially if they were menstruating, or had recently undergone childbirth, miscarriage, or abortion.⁴ The gynaecological texts also contain the only early references to the medical use, likewise by women only, of another substance that also bears symbolic meaning, though of a different order—human milk,⁵ in some cases specifically that of a woman who has borne a male child (hereinafter, “kourotrophic milk”).⁶

Though excrement and milk therapies are gender-specific in the Corpus, they are recommended for either sex in works that arise in a Roman context. The Romans, less polarized sexually than the Greeks, and more accepting of women’s physical nature, do not associate women with pollution to the same degree⁷ and so, it will be argued, do not consider them in special need of purification. This easier acceptance of the female body is likewise reflected in their rich tradition of depicting nursing mothers, a motif rarely found in Greek art.⁸

This paper will consider how excrement and milk therapies entered the Corpus, with a particular view as to how the loss or misunderstanding of information, in conjunction with conceptions of gender, played a role in determining which gender(s) received these treatments. It will make three interrelated arguments:

- 1) that the excrement therapy of the Corpus and later texts may in some cases have resulted from the loss or misunderstanding of the knowledge of magicians and priests;
- 2) that the use of kourotrophic milk shows the influence of Egyptian medicine,⁹ but varies from it sufficiently to suggest ignorance or misunderstanding of Egyptian ritual practices; and
- 3) that the lack of gender-specificity in later works is owed in part to their arising in the less sexually polarized Roman context.

⁴ Cole (1992); Von Staden (1992) 14. Nor were goddesses excepted: the ritual bathing of their cult statues was more frequent than was that of gods, Parker (1983) 27–28; Von Staden (1992) 23 n. 46. Theophrastus tells us, in fact, that expiatory sacrifices were made when the silver-fir statue of Eileithyia “menstruated” (exuded resin), *Inquiry into Plants* (*De historia plantarum*) 5.9.8.

⁵ Gourevitch (1990) 93–98.

⁶ *gala* (or *galakti*) *gunaikos kourotrophou*, *Diseases of Women* (*De morbis mulierum*) 1.75 (8.166.3 L), 84 (8.206.19 L); 2.158 (336.8 L), 162 (8.340.7 L); *Sterile Women* (*De sterilitate*) 3.214 (8.414.18 L).

⁷ Hanson (1991) 255–268; Flemming (2000).

⁸ Bonfante (1985) 195–203; (1997) 174–196.

⁹ Suggested first by Dawson (1932) 9–16.

EXCREMENT THERAPY

Papyri Graecae Magicae 12.401–444 (Preisendanz) tells us that Egyptian scribes gave code names to “the plants and other things they use” (τὰς βοτάνας καὶ τὰ ἄλ[λ]α οἷς ἐχρῶντο [sc. οἱ ἱερογραμματεῖς], 403) to prevent laymen from harming themselves by mispracticing magic. But, says the author, he himself has collected the names of the true ingredients, together with the code names, from many copies of secret holy writings (see Appendix).

It is noteworthy that in every case the code name denotes a substance derived from a human, animal, or god, whereas the same is true of only six of the ingredients the priests actually used (marked by an asterisk in the Appendix), the rest being mostly mineral and botanical, the latter indeed emphasized in the line quoted above. The code names are striking, too, because they denote precisely the sort of ingredient that is the hallmark of magical remedies (*e.g.*, Hestia’s blood, 427; hawk’s blood, 438), whereas the same is not necessarily true of botanical and mineral ingredients. Since, with few exceptions, such as venoms, substances derived from animals do not have a biochemical effect on our bodies, we tend to assume that any therapeutic effect is primarily emotional or spiritual, arising from the ritual metaphors in which they play a part.¹⁰ By contrast, botanical and mineral pharmaceuticals, whether or not they bear symbolic meaning, may interact with the body’s chemistry.¹¹ As a result, we do not normally assume that a medical text recommending white hellebore, for instance, necessarily reflects the influence of magical medicine, whereas we do tend to do so when animal substances are called for.

This passage makes clear, however, that the inclusion of animal (or “divine”) substances in a medical text, while it may indicate the influence of magicians, does not necessarily reflect their true pharmacopia, which may well have relied heavily on botanicals. This

¹⁰ It is “sympathetic magic” or, as Tambiah views it, an analogical mode of thought (1973) 199–229.

¹¹ Chemicals derived from plants are among the active components of one-quarter of the prescription drugs in use in the United States today, Plotkin (1993) 7; of the large number of plant-derived drugs in modern medicine, 74% came into use because of chemical analysis isolating the pharmacologically active components of plants known from traditional medicine, Johns (1990) 273.

opens up the interesting question of whether the priests and magicians did not use magical metaphor in a conscious effort to reassure their patients that their medicines were imbued with the virtues of powerful gods and animals, while themselves having a different understanding of their workings. Two of the six cases where the magicians did use animal substances may support this view: “leech,” for which “snake’s head” is the code name (408), and “egg of blister beetle,” which is called “bull’s semen” (437). Laboratory-raised leeches are used today in wound treatment, and blister beetle is not chemically inert in the human body, and was used in the aphrodisiac “*kantharis*” (Spanish fly).¹² We can only speculate, but the leeches may have been intended for wound treatment, for which a snake’s head would have seemed a reasonable substitute metaphorically speaking, as would bull’s semen for blister beetle eggs, if the latter were intended for an aphrodisiac.

It would outstrip the evidence to suggest that each time animal ingredients appear in our medical texts we have evidence for the loss or misunderstanding of the closely-held information contained in lists such as the one under discussion. Animal substances appear in virtually every traditional medical system, and it is highly unlikely that they do because of such lapses. Moreover, we know that attempts were made to preserve such information.¹³ The lists of synonyms that accompany the entries in Dioscorides’s *On Pharmacy* (*De materia medica*) include names similar to the code names in our Papyrus passage. We see there, for example, the following alternate names for various plants: “man’s blood” (artemisia, 3.127),¹⁴ “hair of a dog’s head” (dill, 3.67), “blood of an eye” (anagallis, 2.209; cf. “blood from an eye” used of tamarisk gall, PGM 12.421). These synonyms are not from the original text of Dioscorides, but from an external source or sources, and they preserve the identities of the plants in well over a dozen languages, dialects, and systems of nomenclature, the latter of which include names apparently given by priests, magicians, and members of other secretive groups, such as the Pythagoreans. It is significant for the present argument that when the synonym refers

¹² Scarborough *ad loc.* in Betz (ed.) (1986, 1992).

¹³ Scarborough calls our attention to similar lists in later medical texts, in Betz (ed.) (1986, 1992) 167 n. 95.

¹⁴ Perhaps there is a connection here with the human blood required by Artemis Ortheia (Pausanias 3.16.7–16); see King (1998) 75–98.

to an animal substance, such groups are often mentioned as being the source. Though we will probably never have enough sources such as our Papyrus text to establish particular paths of influence or transmission, it is intriguing that we have a match between our text and the synonyms in Dioscorides: “semen of Hermes” is the Papyrus’s code name for dill (419), and it is also a name the “magoi” give dill in Dioscorides (3.67).

The excrement therapy of the Corpus may reflect, I suggest, a loss or misunderstanding of just such closely-held knowledge. The gynaecological treatises probably preserve older knowledge and practices,¹⁵ some of it surely handed down by midwives, nurses, and other women,¹⁶ some of whom will have been foreign,¹⁷ and none of whom will have been well-educated or privy to priestly secret knowledge. It is plausible that along with the many other Egyptian and Near Eastern pharmaceuticals they helped to introduce into the Greek pharmacopia,¹⁸ there were some that resulted from the sort of misunderstanding our Papyrus passage would have fostered. And if foreign midwives and nurses had a greater influence on the gynaecological texts than they did on the rest of the Corpus that, together with Greek views concerning the pollutedness of women’s bodies, may have determined the gender-specificity of the excrement therapy in the Corpus.

MILK THERAPY

Egyptian sources may have contributed an unusual item to Greek and Roman pharmacopias: “the milk of one who has borne a male child” (London Medical Papyrus, 20, 46; Papyrus Ebers 109, 111,

¹⁵ Von Staden notes that “Hippocratic uses of ‘excrement pharmacy’ overwhelmingly occur in passages identified by Grensemann as belonging to textual stratum A, that is, to what he regards as the oldest tradition in the Hippocratic gynaecological writings”—a factor that he considers significant in relating Hippocratic womb therapy to purificatory ritual (1992) 13.

¹⁶ Views differ as to the role of women in this process: Rousselle (1988); Riddle (1992); Demand (1994) 63–70, 132; (1995) 283–287. Notes of caution are issued by King (1995) 135–148, and Hanson (1998) 71–94.

¹⁷ Demand (1995) 283.

¹⁸ Von Staden relates some of the fumigatory gynaecological therapies of the Corpus to both Near Eastern and Greek traditions of ritual purification (1992) 17–18.

368, 384, 408, 414, 499, 500, 575, 763; Berlin Papyrus 3027 7, 4).¹⁹ It is a fixed phrase, as is the Greek one for kourotrophic milk (see above), perhaps indicating a direct translation. The Egyptian phrase referred to the goddess, Isis, and her infant son, Horus; Egyptian healers obtained her milk by way of a transubstantiation ritual in which they poured human milk²⁰ into and out of anthropomorphic vases of Isis nursing Horus²¹ while reciting a *historiola* about them.²² Despite the ritual emphasis on the milk as nourishment, the Egyptian prescriptions do not generally call for the transubstantiated milk to be drunk, even by infants, but recommend it for washes and ointments; the one exception is where it serves as a fertility test.

In the Corpus, kourotrophic milk is called for five times (see above) and, as with Egyptian practice, is drunk only when used to test fertility. In contrast to Egyptian practice, however, the milk is used primarily for cleansing or softening vaginal pessaries. This use of specifically kourotrophic milk mirrors nearly all the remaining eighteen passages in the Corpus in which human milk (unqualified) is recommended:²³ fifteen call for “woman’s milk” to be used in vaginal pessaries, and one for a pregnant woman’s milk to be used in a cake that will reveal the sex of the baby.²⁴ The remaining two, however, are more similar to Egyptian remedies: one, though it appears in a gynaecological text, recommends woman’s milk for an eye ointment; the other, for an ear wash. That these recommendations so closely reflect Greek or Egyptian kourotrophic milk recipes, are sometimes in close proximity to them,²⁵ and frequently employ

¹⁹ I rely for translations on: Ebbell (1937); von Deines, Grapow, Westendorf (1958); Bardiniet (1995).

²⁰ Human milk was the optimal ingredient (Robert Ritner, private correspondence), though Desroches Noblecourt (1952) 62 thinks that animal milk may also have been used.

²¹ The vases are reproduced in Desroches Noblecourt (1952) 49–67.

²² Ebers 499; see Ritner (1995²) 8, and Ghalioungui (1973²) 145.

²³ *Diseases (De morbis)* 3.1 (7.120.9 L); *Nature of Women (De natura muliebri)* 32, 109 (7.352.13, 426.6 L); *Mul.* 1.74 (8.156.10; 160.1, 160.13 L), 75 (8.166.10), 78 (8.172.15, 176.15, 180.12 L), 84 (8.206.13, 208.10 L), 105 (8.228.12 L); *Mul.* 2.179 (8.362.13 L), 205 (8.394.9; 396.5 L); *Steril.* 3.216 (8.416.21 L), 3.243 (8.458.2 L). Human and animal milk were also vectors for ingested medicinal plants: *Morb.* 4.55 (7.600 L); *Hdt.* 4.58; *Thphr.* *HP* 9.15.4; Pliny *Natural History (Historia naturalis)* 24.19, 28, 98–99, 28.33.124–125; Soranus, *Gynaecology (Gynaecia)* 2.56 (thanks to Ann Hanson for this reference).

²⁴ See Hanson, (1995) 291–307, esp. 302.

²⁵ Three of the kourotrophic recipes have a woman’s milk recipe on the same

Egyptian ingredients,²⁶ suggest that most or all of them had Egyptian recipes as their source.²⁷

Archaeological evidence supports the view that the Egyptian transubstantiation ritual is connected to Greek use, despite some differences in the medical application. As noted above, Egyptian influence on the Hippocratic pharmacopia is marked, and Greece's contact with Egypt, though it may sometimes have vacillated, was never entirely lost from the Bronze Age forward.²⁸ Moreover, the period just prior to our earliest gynaecological texts saw a tremendous increase in contact with Egypt. Nancy Skon-Jedele, for example, has catalogued 5000 Egyptian or Egyptianizing objects that were excavated from Greek sites, usually Geometric/Orientalizing or Archaic contexts in temples on Crete, Samos, Rhodes, and other areas in close contact with Egypt.²⁹ From this and other evidence, it is clear that some Greeks were learning of and even worshipping Egyptian deities, or were syncretizing or associating them with Greek ones.³⁰ For present

or following page of Littré: *Mul.* 1.75 (8.166.3 L), 1.84 (206.19 L), *Steril.* 3.214 (8.414.18 L).

²⁶ See, for example, *Mul.* 1.84 (8.206.13 L), which is followed by a kouroutrophic milk recipe (see previous note) that, along with other recipes on the same page of Littré, uses such Egyptian ingredients as silphium, red natron, "Egyptian oil," "Egyptian scented oil," *Mul.* 1.84 (8.206 L).

²⁷ Of interest is the eye ointment, *Mul.* 1.105 (8.228.12 L), whose placement here may be owed to newborns' tendency to eye infections. Dr. S. Humenick (Virginia Commonwealth University) has documented the cure of a newborn's severe eye infection with breast milk (unpubl.).

²⁸ See, for example, Burkert (1992); Faraone (1992); Kopcke and Tokumaru (edd.) (1992); Morris (1992); West (1997).

²⁹ (1995). There is evidence for exchange in the opposite direction, too. For example, Möller notes that "It has been observed that a large proportion of early Athenian pottery found outside Attica went to Naukratis or elsewhere in Egypt. Of the vases exported from Attica, two-thirds of those by the Gorgon Painter and his circle, almost all of those from the Keramikos Painter and his workshop, and almost half of the Early Olpai found overseas were discovered in Egypt. Not until near the mid-sixth century can Athenian vases be found in great number all over the Greek world," (2000) 123.

³⁰ Hdt. 2.41–65. On the association of Hera with such powerful goddesses of fertility and healing as Isis, Ištār, and Gula, see Burkert (1992) 9–11, 15–23, 26–27, 54–55, 62–63, 75–79 (cf. his related discussion there of the derivation of Apollo's epithet "Asgelatas" and perhaps of "Asclepius" from Gula's cult title "Azugallatu" ("great healer")); Kyrieles (1988) 215–221. See Burkert (1987) 6, 20–21, on Greek identification of Isis with Demeter from the Archaic period, and for the influence of a myth of Isis on *The Homeric Hymn to Demeter* and the Eleusinian mysteries. On the pervasive Egyptian and Levantine influence on Rhodian myth and cult, see Morris (1992) 133 (cf. Kingsley (1995) who argues that Anatolian religious and mag-

purposes, an Ionian dedicatory inscription to Isis on a bronze statuette is of special interest; the provenance is unknown (possibly Naucratis), but the inscription itself is datable on epigraphical grounds to the late sixth or early fifth century BCE.³¹

Among the objects studied by Skon-Jedele are four anthropomorphic vases, similar to the Egyptian ones of Isis nursing Horus mentioned above and possibly of Greek manufacture.³² Their presence suggests that the transubstantiation ritual may have been performed by Greeks, or was at the least known to them. They were found at the Cretan cave sanctuary of the birth-goddess, Eileithyia Inatia,³³ where the largest single collection on Crete of Egyptian and Egyptianizing items has been found.³⁴

Representations of Isis suckling Horus were found, too, at the Heraion on Samos, though these were figurines, not vases.³⁵ The Samian cult of Hera had close ties to the Greek trading post of Naucratis,³⁶ where the worship of Hera can be traced from approximately 625 BCE.³⁷ Möller argues that Naucratis was the main channel in the Archaic period for many of the Egyptian items that reached Greece.³⁸ Given Samos's long-standing and involved relationship with Egypt and her close ties to Naucratis, it is not surprising that the Samian Heraion has yielded more genuine Egyptian objects than any other Greek site,³⁹ many of which probably came to Samos via Naucratis.

ical traditions made their way to Acragas via Rhodes and Crete, 224–225). For the transmission of ritual practices from the Near East to Greece see, for example, Romano (1988) 127–133; Faraone (1992).

³¹ Tinh and Labrecque (1973) 9 (the inscription was published in Edgar (1904) 337; Möller (2000) 96–98, 175–176.

³² Skon-Jedele (1995) 1768–1779, #1562–1563.

³³ Skon-Jedele remarks upon the appropriateness of these and other Egyptian and Egyptianizing offerings to this goddess; in addition to the anthropomorphic vases, there were figurines of Isis (healing and childbirth) and Horus (healing) together and alone; Bes (childbearing and young children); Sekhmet (disease), and her child, Nefertem; monkeys (fertility); and cats (sacred to Bastet, who is associated with sex); (1995) 1768–1779.

³⁴ Skon-Jedele considers open the question of whether these are imports from Egypt, or Egyptianizing products from Rhodes, (1995) 1778.

³⁵ Skon-Jedele (1995), #1562–1563.

³⁶ Kron calls the Heraion in Naukratis the “Filialheiligtum der samischen Hera in Aegypten,” (1988) 145.

³⁷ Möller (2000) 101 (Hera's worship); 188, 214 (the earliest Greek presence).

³⁸ (2000) 182–215.

³⁹ Skon-Jedele (1995) 1453.

This brief glance shows that Greek-Egyptian contact in the period before and during the writing of the Hippocratic gynaecological texts was of sufficient frequency and sophistication to permit the transmission of religious imagery and medico-religious ritual. It is not impossible, in other words, that some Greeks learned how to create the divine milk of Isis from Egyptian priests, spouses, or slaves, or from fellow Greeks travelling to or living in Egypt,⁴⁰ and that that knowledge—perhaps somewhat altered—eventually entered the oral tradition that shaped the gynaecological treatises, and that probably included the practices of wet-nurses and midwives. Slave wet-nurses, many of them foreign-born, will also generally have been the source for most or all of the actual kourotrophic milk itself (and of the other human milk called for in the Corpus), as middle-class and aristocratic Greek women of the classical period may not have nursed their own babies very frequently.⁴¹ Such a path of transmission would at any rate account for the differences in the therapeutic ends to which the milk is put in the Egyptian and Greek traditions, as the testimony of wet-nurses regarding gynaecological matters would have seemed far more credible to male medical writers than their views on treating other ailments. Or the difference may have arisen as the result of error, loss of knowledge, or innovation, or it may be that extant Greek texts preserve Egyptian remedies that dropped out of the Egyptian textual tradition as we now have it.

In any event, such a path may also account for the appearance of the word “kourotrophos” in the Corpus. It is a striking word to find in medical treatises, as it occurs most frequently by far in poetic texts, where it is used almost exclusively of goddesses, but also of homelands, and abstract ideals, which are “child-nurturing” only in an abstract sense.⁴² As Bonfante notes, no Greek cult epithet

⁴⁰ See Möller (2000) 32–36 on the Egyptian practice of granting land to mercenaries and on the “considerable number” of Greeks living in Egypt before 650; cf. Hdt. 3.26 on Samian mercenaries living in what is likely the Khargeh Oasis around 525, Möller (2000) 34 n. 64.

⁴¹ Bonfante (1997) 184–185.

⁴² For example: of goddesses (Hecate: Hesiod *Theogony* 450, 452; *Orphic Hymns* (*Orphica*) 1,8; Apollonius, *Argonautica* 3.861; Artemis: Diodorus Siculus, 5.73.6; *Orph.* 36,8; Eirene (as goddess or abstraction): Hes., *Works and Days* (*Erga*), 228, Euripides, *Bacchae* 420; Demeter: *Orph.* 40,2 and 13; 65,9; Earth: Paus. 1.22.3); of homelands (Delos: Callimachus, *Hymn to Delos* 2, 276; Ithaca: Homer *Odyssey* 9.27). “*Kourotrophos*” may also refer to nursing women, or to other human care-takers of children, but this is by far the rarer use.

corresponds to Latin “*nutrix*” (e.g., Dea Nutrix, Diana Nutrix), which denotes breast-feeding specifically, since Greek kourotrophic goddesses—at least those from the classical period and the mainland—did not care for their *kouroi* by actually nursing them; the Greek word that does refer specifically to a wet-nurse, “*tiththe*,” is never used of a goddess.⁴³

“Kourotrophos,” then, is a marked word whose strong religious and metaphorical connotations cohere with what I suggest are the ritual origins of its use in Greek medicine. Isis, who nursed her son back to health, and who granted immortality to the pharaohs through her milk, was kourotrophic *sensu strictu*, but that representation could not survive in classical Greece for long, where chariness about the naked breast and breast-feeding was so pronounced.⁴⁴ As Bonfante remarks:

... female nudity, including the view of the naked female breast, was generally felt by the Greeks to be something to be avoided. The nursing image in particular was a sign of non-civilisation, characterising the animal nature of such creatures as centaurs and barbarians.⁴⁵

This same disquietude is reflected in *Glands* (*De glandulis*) 16 (8.570–572 L),⁴⁶ which states that milk is produced from uterine blood that is drawn up to the breasts and transformed into nourishment for the baby after birth. But, just as with menstrual blood, blockage can cause the woman grave problems: if a woman should lose a breast, she will suffer many symptoms, which will arise from the milk’s continuing to flow from her uterus to her upper body, but having nowhere to go. She will, in fact, experience suffocation, just as do women who have an excess of menstrual blood. Others, too, associated milk with blood: Empedocles proposed that milk was putrified blood relating, apparently, *puon* (colostrum) to *puos* (pus).⁴⁷ Aristotle, who preserves the fragment, strongly objects, as he views milk as fully concocted blood.⁴⁸

⁴³ Bonfante (1997) esp. 186–187.

⁴⁴ Bonfante (1997).

⁴⁵ (2000) 280.

⁴⁶ On this and other passages related to human milk, see Dean-Jones (1994) 215–223.

⁴⁷ 59 (68) Wright; this point is noticed by Wright *ad loc.*

⁴⁸ *On the Generation of Animals* 777a7.

The notion that milk is converted or decomposed blood may have reflected and re-enforced the fear and discomfort regarding the breast and breast milk—and women’s physical nature in general—that was so strongly expressed on the Greek mainland in the classical period. This conception of the nature of human milk, which is inextricably tied up with perceptions of women in general, may also have contributed to the nearly complete segregation of Hippocratic remedies calling for human milk to the gynaecological treatises where, we should recall, it was chiefly used in vaginal pessaries. Perhaps it seemed appropriate to place the milk near its point of origin, or perhaps it was felt to be akin to the ingredients of excrement therapy. In any event, the original ritual context for the “milk of one who has borne a male child” has been lost, as the Greeks of this period will not accept the verbal or visual image of a lactating goddess, and the original therapeutic use has been largely lost or, at the very least, greatly altered.

THE ROMAN CONTEXT

Medical texts that arise in a Roman context mention both excrement therapy⁴⁹ and remedies involving human milk, including that of a woman who has borne a boy (now identified with the mundane “*quae marem enixa sit*” and “*arrenotokos*”).⁵⁰ They are markedly different, however, from their Classical predecessors in that they are not gender-specific, nor is the milk used solely in ointments and pessaries, but is often an ingredient of a potion; Galen, in fact, even recommends suckling directly from the woman as the easiest way to get the milk.⁵¹ These changes cohere with the views of female phys-

⁴⁹ See, for example, Dsc., *De mat. med.* 2.80–81; Galen, *On the Mixing of Powers and Simples* (*De simplicium medicamentorum temperamentis ac facultatibus*) 10.1, 10.2.15, 18–30 (12.247, 284–288, 290–309 K). On these and other related passages, see Riddle (1985) 132–133, 141; Von Staden (1992) 8; Keyser (1997) 186–192.

⁵⁰ For the phrase “*quae marem enixa sit*” (Plin. *HN* 28.21.72); for “*arrenotokos*” (Dsc. *De mat. med.*, 5.84; Ps. Gal. *On Remedies for Easily Cured Diseases* (*De remediis parabilibus*) 3 (14.519 K.); both are devoid of divine connotations (for cognates of the latter, see Arist. *GA* 723a27, 765a24, 766b34; *History of Animals* (*Historia animalium*) 574a1–2, 585b26, 586b32; Sor. *Gyn.* 1.45.2).

⁵¹ *On the Method of Healing* (*De methodo medendi*) 6.6 (10.474–475 K); *On Decay* (*De marcore*) 9 (7.701 K).

iology that arose in tandem with the greater freedom of movement and social and economic clout enjoyed by women in Hellenistic and Roman societies.⁵²

The crucial difference in this view is that women's bodies are now seen as analogous to men's,⁵³ rather than as radically different from them, or even in polar opposition to them. Though with the male body the standard, the female would necessarily be inferior, still the very willingness to assimilate the female to the male conceptually indicates less wariness of female physicality than we see in classical Greece. The female body is no longer seen as a great soft sponge that soaks up menstrual blood which, if not used up during menstruation or pregnancy, can cause grave problems.⁵⁴ In fact, the roles played by menstruation and childbirth in a woman's health recede to the point where Soranus and other Methodists actually advocate a life of virginity.⁵⁵ It would seem, then, that while it is not the case that all fears about the female body have vanished,⁵⁶ in general neither Hellenistic and Roman societies as a whole, nor contemporary medical theorists in particular, see women as being serious sources of pollution with special requirements for purification.

This change is reflected in artistic representations, as with the advent of the Aphrodite of Cnidos in the mid-fourth century BCE, nude statues of goddesses come into vogue in Greece for the first time since the Geometric and Orientalizing periods, though they are still not as explicit sexually as male nudes nor, for that matter, as were female nudes from earlier periods.⁵⁷ Images of nursing mothers, however, continue to be rare, and often the context of the scene is such as to maintain the Greek association of the naked breast with imminent danger that we understand from scenes where the breast is bared in supplication.⁵⁸ Etruscan and Italic conventions of female nudity and of nursing mothers are entirely different: from

⁵² Dean-Jones (1991), Hanson (1991), King (1998), Flemming (2000).

⁵³ Hanson (1991) 259, where she points out that, in the first place, some of the older ideas still persist and, in fact, interfere with the cohesiveness of the new ones.

⁵⁴ Hanson (1991) 257–258.

⁵⁵ Hanson (1991) 258–260.

⁵⁶ Pliny's famous listing of the destructive powers of menstrual fluid and of menstruating women reminds us of the persistence of traditional ideas, *HN* 28.23.77–87.

⁵⁷ Bonfante (2000) 271–273, 278–280. Salomon offers a feminist analysis of the Cnidia, paying particular attention to her famous *pudica* gesture (1997) 197–219.

⁵⁸ Bonfante (2000) 281; (1997) 174–175.

Villanovan votive statuettes of the eighth and seventh centuries BCE forward, female nudes appear frequently in Etruscan and Italic art and votive offerings.⁵⁹ But it is in the conventions surrounding nursing mothers that we see the sharpest contrast with Greece, as the image of human and divine nursing mothers is very popular in Etruria, South Italy, and Sicily—all regions where the cult of powerful fertility goddesses had remained strong.⁶⁰ Included among these images are five of Hera/Uni's ritual adoption of the adult Herakles/Hercle by nursing him; in one instance he is well-muscled and bearded.⁶¹ The acceptance of this image, uneasy to our sensibilities, perhaps casts Galen's recommendation to obtain therapeutic milk by nursing directly from the woman in a new light.

We can consider here only briefly the question of whether the rise in the popularity of mystery cults, which we see from the Hellenistic period forward, affected attitudes about excrement therapy. If, in other words, the belief grew that men and women alike were tainted by the mere fact of existence, and were thus in need of ritual purification, medical purification of male patients might have become acceptable, or even expected. Many a Roman soldier, after all, experienced the purificatory *taurobolion* of the cult of Mithras, where the initiate was drenched in an estimated 50 litres of blood from a dying bull—why would he find it objectionable for a doctor or herbalist to treat him with bull's blood (cf. Dsc. 2.97) or dung (Dsc. 2.98)?

A mystery cult of special relevance to the present discussion is that of Isis, which found its way into Greece and Italy in the Hellenistic period under the influence first of the Ptolemies, and then of the Romans. Ptolemaic and Imperial rulers found useful the central *mythos* of the cult, in which Horus's accession to the celestial throne represented on the divine plane pharaonic accession. Images of Isis suckling Horus—or the pharaoh—and thus granting him immortality, were ubiquitous in Egypt.⁶² Macedonian and Roman rulers found it worthwhile to keep this conception of the ruler, and promoted a Hellenized form of the cult. Native Egyptians, however, were the

⁵⁹ Bonfante (2000) 278–280; cf. Bonfante (1985) 195–203.

⁶⁰ Bonfante (2000) 281; see Bonfante (1997) for an expanded treatment of differences between Greek and Etruscan and Italic conventions concerning the image of the nursing mother.

⁶¹ Bonfante (1997) 180.

⁶² Cf. Hera/Uni's suckling of Herakles/Hercle, discussed above.

first members of the cult in Attica, according to a decree dated to 333 BCE, and the same holds true for Delos, where we have evidence for intense cultic activity. Intriguing in this regard is a classical Corinthian anthropomorphic lekythos of a female figure nursing a baby (possibly a nymph with Dionysos);⁶³ it is similar to the Archaic Isis vases discussed above which, we should recall, were found in a cave sanctuary of Eileithyia's on Crete. Does this point to the survival of the transubstantiation ritual in Greece, or to its revival, perhaps under the influence of Egyptian priests?

CONCLUSION

Just as medical remedies can be generated as the result of the acquisition of information or familiarity with practices, so can they be by the misunderstanding or loss of prior knowledge. Because medicine deals with the body, and employs some medicaments that bear symbolic meaning, a new therapy has the potential to provoke complex responses, including ones intertwined with ideas and feelings about gender. In the cases at hand we see that the loss or misunderstanding of knowledge, including that preserved by ritual, and together with changes in socially constructed meanings had important consequences for excrement and milk therapies and their application.

Appendix

PGM 12.408–444⁶⁴

Code Name	True Ingredient
A snake's head	a leech*
A snake's "ball of thread"	this means soapstone
410 Blood of a snake	hematite
A bone of an ibis	this is buckthorn
Blood of a hyrax	truly of a hyrax*

⁶³ See Price (1978) Fig. 25, who acknowledges Isis as a prototype for this and other figures, 31–40.

⁶⁴ I rely on Scarborough's identifications and translation in Betz (ed.) (1986, 1992). The list and the prior paragraph (*i.e.* PGM XII 401–407) also appear in Scarborough (1991) 159–160. On this and similar lists, see now Li Donnici (2002).

“Tears” of a Hamadryas baboon	dill juice
Crocodile dung	Ethiopian soil
415 Blood of a Hamadryas baboon	blood of a spotted gecko*
Lion semen	Human semen*
Blood of Hephaistos	wormwood
Hairs of a Hamadryas baboon	dill seed
Semen of Hermes	dill
420 Blood of Ares	purslane
Blood of an eye	tamarisk gall
Blood from a shoulder	bear’s breach
From the loins	camomile
A man’s bile	turnip sap
425 A pig’s tail	leopard’s bane
A physician’s bone	sandstone
Blood of Hestia	camomile
An eagle	wild garlic (?)
Blood of a goose	a mulberry tree’s “milk”
430 Kronos’ spice	piglet’s milk*
A lion’s hairs	“tongue” of a turnip
Kronos’ blood	. . . of cedar
Semen of Helios	white hellebore
Semen of Herakles	this is mustard rocket
435 [A Titan’s] blood	wild lettuce
Blood from a head	lupine
A bull’s semen	egg of a blister beetle*
A hawk’s heart	heart of wormwood
Semen of Hephaistos	this is fleabane
440 Semen of Ammon	houseleek
Fat from a head	spurge
From the belly	earth-apple
From the foot	houseleek

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THE HIPPOCRATIC TREATISE *PERI OPSIOS*
(*DE VIDENDI ACIE, ON THE ORGAN OF SIGHT*)¹

Elizabeth Craik

Summary

The nature and affiliations of the work are addressed. The closest affinities in medical subject matter (details of eye flux and cautery), linguistic expression (features of syntax, grammar and vocabulary) and stylistic tone (didactic and magisterial aspects) are seen to be with Places in Man. The inference that the work has an 'early' date and west Greek provenance, and that the author may have interacted with Alcmaeon or Empedocles, both known to have taken an interest in the eye, is examined. Evidence for an 'Egyptian' or 'Libyan' (North African) connection is adduced, and a case made for input from Cyrene.

The work on sight occupies a mere four pages of Greek in the modern printed text.² The treatise is not only brief; it is also both technical and corrupt. Little attention has been paid to it in recent decades. Such short works—we may compare the still shorter *On Anatomy* and the somewhat longer *Dentition*—are peculiarly difficult to interpret, and to place in the wider context of the Hippocratic Corpus and other writings. Here this attempt is made. To argue that different works of the Hippocratic Corpus belong together, a conjunction of similar content and similar language is required. Many associations in content can be explained simply by access to a common pool of knowledge, from which items might be taken and reworked. Unless it is unusually esoteric, or there is a high concentration of coincident elements, content is not a reliable indicator. Language may be somewhat more reliable, though here too caution in interpretation

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² Sichel *ap.* Littré 9.152–161 (1861); Ermerins 3.279–283 (1864); Joly (1978) 168–171.

is imperative. Where such elements as vocabulary, or grammatical and syntactical features, or use and frequency of particles and pronouns are shared—especially where these are distinctive or non-standard—they may be pointers to a common tradition.

The title (not, of course, original) may have arisen from a compiler's glance at the first words. The term ὄψις, used three times in the work—in 1 (plural), 2 (singular) and 8 (singular)—can be either abstract or concrete in sense (9.152 and 158 L.). In the former case (the sense in 2 and 8, and the sense more common in the Hippocratic Corpus), it is always singular, 'vision'. In the latter case (the sense in 1), it may be singular or plural, with reference to the seeing organ; that is to the 'eye(s)' or to the central 'seeing part' of the eye, iris with pupil or perhaps pupil alone, though for this the word κορή was available. We might translate 'On Vision' or 'On Sight'; but a general title 'On the Eye' is more apt to the actual content and the rather cumbersome 'On the Organ of Sight' conveys the dual sense, abstract and concrete, of the word ὄψις.

The work, written in a didactic and magisterial style, is a surgical manual; or more probably, in view of its excessive brevity, its abrupt asyndetic beginning and equally abrupt ending, and its marked omissions of common eye afflictions (such as the classic symptom 'inflammation' and the serious condition 'rupture', leading to protrusion of the eyeball) an excerpt from, or notes on, a surgical manual. Procedures are detailed for a series of eye complaints; these can be identified with a degree of plausibility as glaucoma, cataract, effects of trachoma, night blindness and seasonal ophthalmia. The exclusively surgical content makes comparison with non-surgical treatises difficult. There are some general resonances with the practices, and so with the vocabulary, of such surgical works as *Ulcers* and *Articulations*; also with surgical procedures in the gynaecological treatises. Other affinities can be traced with works which are primarily theoretical (especially with *Places in Man*) or primarily nosological (especially with *Diseases 2* and *Internal Affections*) or primarily prognostic (especially with *Prorrhetic 2*) but the emphasis is naturally different.³

³ An instance of context-dependent vocabulary is ἵησις, regularly used of hands-on surgical treatment; an instance of context-dependent expression is the repetition of such "next" conjunctions as ἔπειτα and ὅστερον indicating successive stages in a series of instructions.

The practice of cautery, which features prominently in *Organ of Sight*, features also in *Places in Man*, *Diseases 2*, *Affections*, *Internal Affections*, *Articulations* and *Mochlicon*, as well as certain parts of *Epidemics* and a few other works. It is argued below that the closest connections, in this as in other respects, are with *Places in Man*.⁴ Cautery has traditionally been associated with the name of Euryphon and regarded as a 'Cnidian' practice. However, it may more properly be regarded as an ancient practice, persisting in pockets everywhere.⁵

The author of *Affections* states his intention to write a treatise on diseases of the eyes, and inevitably, speculation has centred on whether our fragment represents this work.⁶ Having treated other diseases arising from the head, the author declares, in the rather grandiose expression of the future perfect tense, that he will treat eye diseases separately (*Aff.* 5 [6.214 L.]). He also regards diseases as arising from the senses of smell, hearing, sight and from venery as well as propounding the more conventional aetiologies of hot, cold, wet, dry, food, drink, exertions and wounds (*Aff.* 1 [6.208 L.]). However, his treatment of other head diseases is very, very general and entirely different from the surgical works; and, if we are investigating possible common authorship, we must note that he says he will write also on suppuration, phthisis and gynaecology (*Aff.* 33 [6.244 L.]).

The range of works projected by the author of *Affections* resembles that proposed by the author of *Articulations*; and the question of inter-related authorship resembles that between *Articulations* and *Glands*, which is closely connected with *Places in Man*.⁷ There are coincident elements in the treatises *Articulations*, *Glands*, *Regimen in Acute Diseases*, *Epidemics* and the gynaecological works.⁸ *Organ of Sight* may now be added to this broad grouping, while *Affections* is an outlier. Vocabulary and expression common to *Organ of Sight* and the gynaecological writings are explored below. For the moment, it may be noted that one peculiarity of *Affections* is that the author refers to a work on

⁴ For *Places in Man* (*Loc. Hom.*), see Craik (1998); also Joly (1978) and Littré 6. 273–349. For references to editions of other Hippocratic works cited in this paper, including to Littré, see Craik (1998) x–xiv.

⁵ See Thivel (1981) 281–282.

⁶ An affirmative answer is given, on the basis of a scrutiny of particles only, by Rodríguez Alfageme (1993).

⁷ See Craik (1998) esp. 23, 137–138; (2002) 285–287.

⁸ See Craik (2002) 287–288, esp. 288 n. 3.

drugs, called *pharmakitis* at 15, 23, 28, 40 (6.224, 234, 240 and 250 L.) or *ta pharmaka* at 4, 18, 27, 29 (6.212, 228, 238 and 240 L.). The content seems to have some association with the recipes in *Organ of Sight* for an eye ointment. Both groups of recipes, those in *Affections* and those in *Organ of Sight*, coincide in part with recipes in the gynaecological works (*Mul.* 1.102–105 [8.224–228 L.]) and in *Regimen in Acute Diseases* (*Acut. Sp.* 65–66 [2.520 L.]).

The author of *Places in Man* regards the aetiology of illness as flux from the head to various parts of the body, including the eyes. Different kinds of ocular flux are classified and appropriate treatments for each specified.⁹ The treatments are: eye salves (13.1,2 [6.300 L.]); purging the body by enemas and laxatives (13.1,4 [6.300 L.]); purging the head by nasal insertions (13. 2,4 [6.300 L.]); cautery of the vessels in the temples (13.7 [6.300 L.]); and, in an extreme case, making incisions in the scalp to the bone (13. 5 [6.300 L.]). Similarly, in *Organ of Sight*, according to type of symptoms, the treatments are: eye salves (9.2,3 [9.160 L.]); purging the body (7.1 [9.158 L.]; 9.1 [9.160 L.]); purging the head (1.1,2 [9.152 L.]; 7.1; 9.1); cautery of the vessels (1.1,2; 3.1–4) and incising the scalp (4.2; 8). There is also cautery almost up to the bone in the skull (3. 1–2). In both treatises too, trephining is practised (*Loc. Hom.* 32 [6.324 L.]; *Vid. Ac.* 8), as is venesection or cupping (*Vid. Ac.* 3.1, 9.1). Treatment of the eyelids, as prescribed in *Organ of Sight* (2.1; 4.1–2; 5.1; 6.1), is by similar methods; that is, by surgical cutting and burning, and by ointments. The author of *Organ of Sight* specifies flux only once (9); this passage recalls the description of eye flux in *Glands*, a treatise already seen to be closely parallel to *Places in Man*. In these works, ophthalmia is associated with flux and swellings (*Gland.* 13 [8.586 L.]; *Vid. Ac.* 7 [9.158 L.]).

One striking common element between the treatises *Places in Man* and *Organ of Sight* is that detailed instructions are given as to how cautery of the vessels should be performed. These instructions are given in similar terminology and with a similar emphasis in content, for instance with procedures to arrest haemorrhage. In addition to the passages with reference to the eyes, discussed above, both treatises have sections dedicated to the subject of cautery (*Loc. Hom.* 40 [6.330 L.] ~ *Vid. Ac.* 3 [9.154–156 L.]). This section of *Organ of Sight*

⁹ See Craik (1998) 147–151 on *Loc. Hom.* 13 (6.300 L.).

has generally been dismissed as out of place in a work on the eye.¹⁰ However, it is entirely apposite: although it concludes with the general statement that the principles of cautery are the same everywhere in the body, it commences with instructions relating to the eye in particular, as becomes evident when the brief and allusive content of *Organ of Sight* is compared with Celsus' extended and clear account of treatments for eye afflictions (7.7.15). Although some elements in the instructions recur elsewhere in the Corpus where cautery is recommended, the strictly surgical stance is unique to *Places in Man* and *Organ of Sight*. The technical term διακαίειν "cauterise" is similarly used; and procedures are similarly outlined. The same salient elements are present in both and it is hard to resist the conclusion that they derive from a common stock of lore or a common written source.

In addition, and perhaps more significantly, a close comparison between the practical instructions given in the two works for treatment of the eye shows a clear and striking coincidence in theoretical approach. In *Organ of Sight*, a distinction is made between eye flux "from above" and eye flux "from below" (ἀνωθεν . . . κάτωθεν, 3.3 [9.156 L.]). In *Places in Man*, a similar distinction is made between fluid flowing from between flesh and bone (that is, between scalp and skull) and fluid flowing from brain (that is, from below skull). Flux "from above" (flux A, common) is from the top of the head, from the area below the scalp and above the skull; flux "from below" (flux B, exceptional and serious) is flux from the brain, from deep inside the head, below the skull. These passages too are illumined by the long and full discussion of Celsus (7.7.15). Celsus' source here is probably *Organ of Sight*: in addition to features already remarked, both works prescribe binding with ligatures and marking the vessels with ink.

When the passages relating to two types of eye flux are viewed in conjunction with the description of the vascular system in *Places in Man* (3.1–2 [6.280 L.]), it appears that flux A is envisaged as passing from the head to the vessels in the temples and so to the outer corners of the eyes, and flux B envisaged as passing from the head through vessels in the forehead to the inner corners of the eye.

¹⁰ Joly (1978) 169 n. 1 comments "ce chapitre semble égaré dans une oeuvre d'ophtalmologie".

Treatment of A is routinely effected by cautery of the temporal vessels, or if this fails by incising (*Loc. Hom.* 13. 3–6 [6.300 L.]) or cauterising (*Vid. Ac.*) the scalp. The therapy applied in other treatises may point to a similar underlying, though there not explicit, set of beliefs: at *Diseases* 2.12–13 (7.18–24 L.), the treatment of flux from the head and elimination of peccant matter by eight eschars at different points on the head (beside ears, at temples, on the back of the head, at inner point of eyes); and at *Affections* 2 (6.210 L.), the instruction to incise the scalp or to cauterise the vessels.

The text, often obscure, is elliptical and allusive. The expression is disconnected, asyndetic and without stylistic pretension. The language is rough, functional and unidiomatic. The syntactic structures are primitive, with compound sentences lacking subordinate clauses and a marked tendency to otiose or careless repetition, especially repetition of the demonstrative pronoun. (See 1, τοιαύτησιν, τούτου, ταῦτα, καὶ τοῦτο, τούτῳ, τούτοισιν, and 6, verb τρίβειν “rub” repeated six times, to describe both preparation of ingredients in an eyesalve, and its application to the patient.) Occasional alliteration is not a mannered stylistic device but suggests rather a mantra, mnemonic of the trainee physician; or it may simply be fortuitous. (See 1, καθαίρειν . . . κεφαλὴν . . . καίειν . . . καῦσις καὶ κάθαρσις τῆς κεφαλῆς.) Second person address is used and instructions are most commonly given by jussive infinitives, conjoined with nominative participles. These features occur in *Places in Man*, and in a few other works. There are two more unusual features in common with *Places in Man*: firstly the use of plural verb with neuter plural subject, perhaps a trace of Doric idiom, and secondly causal ὥς for regular ἅτε with participle.¹¹ (See 3.4, ἐπειδὴν τὰ ἔλκεα ὑγιέα γένωνται and 9.2, ὥς ρεύματος ἐπέχοντος.)

In linguistic, as in syntactical aspects, there are several points of overlap. For instance a preference for compound verbs is apparent (such as the verb παρακαίειν “cauterise beside” occurring only in *Organ of Sight* and *Places in Man*): this is striking, as, in other respects, the language is so plain.¹² Some of these formations may originate

¹¹ Such usage may have been emended away as a solecism by ancient scribes or modern editors in other, more studied, treatises; the irregular ὥς is here emended by Ermerins.

¹² On such compounds, esp. of δια- and ἐπανα- verbs, cf. Craik (1998) 100–101, 198.

as aspects of precise surgical instruction and description: with the three times repeated ἐγκατακαίειν, “burn in and down” in the highly technical context of *Organ of Sight* 3, cf. ἐπανατάμνειν “cut over and up” of equally technical contexts in *Head Wounds*.¹³ Similarly, the προ- verbal prefix is frequently used of surgical procedures: *Organ of Sight* 3, προαφήμι, “let [blood] before” has parallels in such verbs as προκαθαίρω, “purge before” and προλούω, “wash before”. However, in *Organ of Sight* the following δια- compounds are preferred where the simple verbs would suffice: διαβλέπω, διαθερμαίνω, διακαίω, διασημαίνω, διαχρίω, διαχωρίζω. Another instance of overlap is the expression αἷμα ἀφίεναι (so used only in these two works, though the same verb occurs followed by the genitive in *Affections* and in *Diseases* 2).

The diminutive σπογγίον, “little sponge” (twice in *Organ of Sight*) occurs elsewhere only in *Places in Man* (once) and in *Diseases* 2 (three times); elsewhere σπόγγος is invariably used. Use of diminutive forms is in general a feature of gynaecological writing. As noted above, *Organ of Sight* has particular links with the gynaecological works; we may add here therapy by the laxative ἐλατήριον, use of the cream μυσσωτός and specification of wool as ‘Milesian’. Linguistic peculiarities common to *Organ of Sight* and the gynaecological works are these: firstly, adjectives with -ειδής termination (such as θαλαττοειδής, which occurs three times in *Organ of Sight*; cf. *Diseases of Women* 2.116 (8.236 L.), where three separate such adjectives occur, perhaps coincidentally in a description of ocular pathology); secondly, use of the dual number (if we accept Ermerins’ persuasive emendation from the dative singular to the dual at 2.1 (9.154 L.), very rare in the Hippocratic Corpus even where duality is stressed: it occurs only in the gynaecological works and *Epidemics* 5.¹⁴ There are common idiosyncrasies in vocabulary also; for example the rare verbs (compounds again) περιειλέω “wind around” and συμμύω “close [the eyes]”.

This is little more than an impressionistic survey: much more philological work is required. As a *caveat*, it must be noted that this argument for a particular different nexus of connections would require refinement if other elements were introduced and a comprehensive

¹³ Cf. Hanson (1999).

¹⁴ The dual of ὀφθαλμός occurs only in *Epid.* 5 and *Mul.* 1; of σκέλος only in *Mul.* 2 and *Foet. Ex.*; of χεῖρ only in *Epid.* 5, *Mul.* 2, *Nat. Pue.*

study made. The term ἄτρακτος for a cauterising instrument occurs only in *Organ of Sight* and in *Internal Affections*. There are a few coincidences also with the language of *Coan Prognoses*: the adjective λαμπρόν “bright” is applied to αἷμα “blood” only in that collection apart from *Organ of Sight* and the common pejorative term φλανρός (as in *Organ of Sight* 1), which one might have expected to be ubiquitous, is more common in *Coan Prognoses* than anywhere else with twenty-five of sixty-one occurrences in the Hippocratic Corpus; there is a cluster also in *Fractures* and *Articulations*, observed above to be aligned on other grounds with *Organ of Sight*.

However, it is clear that in both content (on eye flux and on cautery) and expression (style, syntax and grammar) *Organ of Sight* particularly resembles *Places in Man*. It has been argued that *Places in Man* is an early work, originating in Italy or in Sicily, a region where there were many distinguished medical practitioners, notably Democedes. It may be suggested that this treatise has a similar date and provenance; and that the author had affiliations with Alcmaeon of Croton (*floruit* around 500 BCE) and Empedocles of Acragas (*floruit* around 480 BCE), both known to have taken a particular interest in the eye.¹⁵ However, the severely surgical tone of *Organ of Sight* militates against direct comparison with these more theoretical and philosophical writers. Although precise connections are hard to establish, it is plausible that thinkers with an interest in the workings of the eye and doctors with an interest in diseases of the eye might have found their activities complementary; just as exponents of secular and of sacred medicine coexisted in Cos, Epidaurus and Pergamum.

Both Alcmaeon and Empedocles, like the medical writers, wrote of the ‘bright’, or fiery, element in the eye, and Alcmaeon viewed this as the part on which clarity of vision depended; language as well as thought has Hippocratic resonances (DK 24 A 5 = Theophrastus, *De sensibus* 25).¹⁶ And, like the Hippocratic writers, Alcmaeon observed that eye and brain were linked by *poroi* “ducts”, probably to be regarded as the optic nerves. Alcmaeon was said to have dissected the eye (DK 24 A 10 = Chalcidius, *In Timaeum*. 279), but it is unlikely that this bears any relation to the activities of the

¹⁵ See Longrigg (1993) 58–60 on Alcmaeon and 72 on Empedocles.

¹⁶ Cf. Jouanna (1983) 215, n. 3.

doctor of *Organ of Sight*: even if the story is true, the dissection was almost certainly of an animal.¹⁷ There is evidence that Democritus too took an interest in sense perception and dissected animals, cutting into the *βρέγμα*, “forehead”.

It has already been argued that *Places in Man* shows some Egyptian influence. *Organ of Sight* surely does also, and to a greater degree. We should say rather that there may be input from various regions in north Africa; from Libya as well as Egypt. These terms were not always used with precision: Strabo used “Libya” for all of the African continent in stating that the inhabited world had three continents: Libya (the smallest), Europe and Asia (17.3.1). The evidence for Egyptian or Libyan input is varied and cumulatively compelling. Above all, there is the good fifth century evidence of Herodotus, who visited Egypt around 430 BCE.¹⁸ From Herodotus we learn that there was a degree of medical specialisation in Egypt: among specialist practitioners he mentions ophthalmologists as well as dentists and others (2.84). Further, he tells us that the Persian king Cyrus—seeking the best treatment—recruited an eye doctor from Egypt through the Pharaoh Amasis (3.1). Herodotus regarded the doctors of Libyan Cyrene as most famous after those of Croton: those of Cos and Cnidus do not rate a mention (3.131).¹⁹

In an unrelated passage (4.187.2) Herodotus informs us that cautery of the vessels in the crown and temples was regularly practised in Libya, with a view to ensuring health by the prevention of downward flow of phlegm. Such cautery, as a therapeutic rather than preventive measure, is readily paralleled in the many Hippocratic works which prescribe treatment for conditions arising from flux from the head, especially to the eyes but also to ears, nose and elsewhere in the body. These practices were widespread in antiquity. Celsus, writing in the first century CE, regards this aspect of medicine as part of universal practice, though with local variations: the *Afforum curatio* was to burn the crown of the scalp to the bone, whereas in Gaul the vessels in the temples and the crown of the head were

¹⁷ In an important paper on this subject, Lloyd (1975) discusses the evidence of *Loc. Hom.*, *Aff.* and *Morb.* 2, but curiously makes no mention of *Vid. Ac.*

¹⁸ See Althoff (1993).

¹⁹ The appended statement on Cyrene has been deleted by Stein and a few others, in the belief that it is a scribe's chronological note; but most editors retain the text in its transmitted form, which was that known to Eustathius.

treated. The “African” procedure is exactly that detailed in *Organ of Sight* (3.1–2 [9.154 L.]).

The second category of evidence is that of papyri, especially the Ebers papyrus, which deals with different diseases of the eyes and recommended treatments. Although this of a much earlier date, c. 1500 BCE, medical conservatism makes it acceptable as evidence.²⁰ The Ebers papyrus (ophthalmology) prescribes for one case, *sharu* disease, treatment by roasted ox liver pressed on the eye; further, at the beginning of the Kahun papyrus (gynaecology) a patient suffering from an eye disorder is prescribed, after treatment of both uterus and eyes by fumigation, a meal of fresh (?raw) ass liver.²¹ These passages in Ebers and Kahun may be considered with the treatment of night blindness in *Organ of Sight* 8, where the patient is apparently exhorted to “gulp down” one or two large raw ox livers.²² The reading “raw” ought probably to be emended. However, the gynaecological element is of interest, as in two Hippocratic passages, (cooked) liver is prescribed for gynaecological patients: *Diseases of Women* 1.34 (8.80 L.), sheep or goat liver in cases where, near parturition, the uterus fills with “wind” and 2.110 (8.236 L.), sheep or ox liver to control unnatural flow of menstrual blood. There are parallels in Herophilus, Celsus, Paul of Aegina, Aretaeus, Galen and Pliny for treatment of night blindness by (always cooked) liver of various animals; sometimes the cooking juices are used as a lotion as well as the meat for consumption.²³

Another parallel between early Egyptian medicine and the medicine of *Places in Man* is in the supposed system of the blood vessels. The distribution of the vessels, as described in the Egyptian “vessel book” is: to the back of the head, to the forehead, to the eye, to the eyebrow and to the temples; the vessels to the temples had as their contents blood and water, carried to the eye. Also, the distinction made between the bones in the head, perhaps skull and temporal bone, indicates an anatomy similar to that of exponents of

²⁰ See Nunn (1996) 199–200 on Ebers papyrus, 119 on *stelae* corroborating that ophthalmology existed as a recognised specialisation, and 206 on lack of evidence for any major change in the format or content of Egyptian medicine over the long period 2600 to 525 BCE.

²¹ See Nunn (1996) 200 on Kahun papyrus 1: “then you shall cause her to eat fresh liver of ass”.

²² The passage is discussed by Gourevich (1980).

²³ Cf. von Staden (1989) 425–6.

two types of flux to the eye, upper and lower:²⁴ the anatomy of the head was well known, as in mummification procedures the contents of the brain were removed through the nose. And the suggestion of a remedy, three times repeated in the Ebers papyrus, to drive out blood, or “vessels of blood”, from the eyes recalls the problem of αἱματῶδες τι . . . ὑγρόν “a bloody sort of moisture” at *Places in Man* 13.6 (6.302 L.).

There is much general evidence for communications between the regions. Egypt was known to Greeks already in the seventh century, when mercenaries served under the pharaohs, and there were soon Greek and Carian settlers (Hdt. 2.61). Homer mentions Egypt incidentally as a source of *pharmaka* “drugs” (*Odyssey* 4.227–232, Helen had drugs from Egypt, a fertile land and a rich source); in the classical era, Theophrastus regarded Egypt as a prime source of drugs (*History of Plants* 9.15; cf. *HP* 4, list of plants peculiar to regions: 4.2.1 ff. Egypt; 4.3.1 ff. Libya; 4.4.1 ff. Asia). This is corroborated by references in the Hippocratic Corpus itself to Egyptian, Libyan, and Ethiopian specifics. The adjective “Egyptian” occurs seventy-six times in the Hippocratic Corpus, with reference to perfume, soda, linen and so on. Ethiopian cumin too was prescribed. Most of these references are in the surgical and gynaecological works; also in *Epidemics* 2, 5 and 7, in *Internal Affections* and in *Regimen in Acute Diseases*. There was a regular trade route to the mainland from Egypt and from Sicily; grain especially was an important commodity, which had to be imported to the Greek mainland. In addition to grain, Egypt exported linen and papyrus; the main imports were wine, oil and pottery.

Cyrene, which was founded on the Libyan coast by Dorians from Thera in around 630 BCE, and which had a further influx of immigrants from Greece around 570 BCE, rapidly became an important Greek city: culturally cosmopolitan, intellectually vibrant, and prosperous both agriculturally and economically. Relations between Cyrene and the surrounding peoples, largely nomadic, were complex, as were relations with the greater powers of Egypt and Persia.²⁵ When the

²⁴ See Nunn (1996) 45 and diagram, 50.

²⁵ Laronde (1990) describes a situation of contacts and change, as well as conflicts. See also Schafer (1952) and, especially, the palmary survey of Hornblower (1983) 59–65, “Cyrene, Africa and Egypt in the fifth century”. Strabo 17.3.21 gives a useful potted history.

Persians conquered Egypt in 525 BCE, Cyrene was able to coexist independently for a time, though it later became part of the Persian empire; it was free again in the middle of the fifth century, about the time its monarchy finally collapsed, but never regained its earlier importance.

It may be conjectured that Cyrene was an interconnecting hub, an intermediary in communications between the Aegean and Italy. Sea communications with both were good. The route to the Aegean was via Crete, due north of Cyrene and readily reached by favouring winds; to reach Sicily, voyagers could either take the direct route or hug the north African coast before making a short crossing on the open sea. Various pointers corroborate Herodotus' estimate of the importance of Libyan Cyrene as a medical centre. It was a major centre of Asclepius worship.²⁶ It was the centre of trade in the healing plant silphion, of which the local monarchy had a monopoly. Although the plant is familiar from illustrations on the coins of the region, it has not been certainly identified. One identification canvassed is *Thapsia Garganica*. The stalk and the sap had medicinal properties as a binding agent, or styptic. According to Theophrastus, the plant was peculiar to Cyrenaica, though according to Strabo an inferior variety grew in "Media".²⁷ The medicament is mentioned forty-six times in the Hippocratic Corpus. Exactly half of these occurrences are in the gynaecological works; there are some in the surgical works as well as *Internal Affections* (seven occurrences); *Regimen in Acute Diseases* (four); *Diseases 2* and *Diseases 3* (four each); *Diseases 4* (one); *Epidemics 7* (two).

People and ideas, as well as goods, surely travelled these routes. Although, as usual, names are elusive it is clear that Egypt produced notable doctors, some known to mainland Greeks. The ideas of Ninyas of Egypt about disease-inducing flux are among those cited, with those of Euryphon of Cnidus and many others, including many from Italy and Sicily, in the 'Menoneia' (Anon. Lond. IX 37–44). There is a tradition of a visit to Cyrene as well as to Italy by Plato, who had pronounced medical interests. Iamblichus begins his catalogue of Pythagoreans with men of Cyrene (DK 58 A 1). Theodorus

²⁶ See Presicce (1991).

²⁷ See Theophrastus, *HP* 4.3.1 and also 9.1, 4, 7, on which see Capelle (1954), esp. 178–183, and Strabo 11.13.7 and cf. 2.2.3; 2.5.33; also Herodotus 4.169.

of Cyrene, whose name was used to signify an archetypal mathematician, speaks briefly, as an old man who was teacher of Theaetetus in Plato's dialogue of that name (Pl. *Theaetetus* 146 B). The career of the eye doctor who went to Persia, like that of Democedes (Hdt. 3.1, 125, 131–132), is evidence of interaction between distant regions and of considerable professional mobility; also of the tendency for the best doctors to gravitate to places where they could find power, prestige and patronage; that is, to royal courts or to wealthy aristocratic households. Similarly, Roman emperors employed distinguished physicians; among them Oribasius, a most prolific medical writer.

A parallel may be suggested. Poets as well as doctors depended on potentates and their patronage. Even the tragic dramatists, whose work is often taken to epitomise democratic Athens at its zenith, travelled to foreign courts: in old age, Aeschylus lived in Sicily and Euripides in Macedon, while Sophocles was regarded as unusual in not leaving the city. The career of the top poet Pindar is analagous in its locale to that of the top doctor Democedes, both being peripatetic. Both were active at Aegina and neither at Athens: a quarter of all Pindar's epinicians are for Aeginetans, only two for Athenians. Pindar had patrons in Sicily (centre, with the south Italian cities, of west Greek medicine), in Thessaly (where the doctors of the *Epidemics* practised) and in Cyrene (also a medical centre). The travels of Pindar can be plausibly reconstructed by inference from the content of his poems, in conjunction with information in the ancient *vita*. Chronologically, Pindar's career is as follows: around 498 BCE, patrons Aleuadae of Thessaly (*Pythian* 10); around 474–466 BCE, patrons Hieron and Theron in Sicily (*Olympians* 1 and 3; *Pythian* 1); 474 BCE, patron Telesicrates of Cyrene (*Pythian* 9); 462 BCE, patron Arcesilas, king of Cyrene (*Pythians* 4 and 5). The ancient *vita* tells of a stay at the court of Hieron, ruler of Syracuse. Scepticism about the information given by ancient biographers, and about biographical information implicit in an author's work, has been current for some time; but this scepticism—in any case rather exaggerated—is inappropriate in the case of a lyric poet evidently naming and praising his patrons. It is impossible to be certain that Pindar went personally to Cyrene to hear his odes performed, but it is highly probable.

Pythian 5 seems to display familiarity with the topography of Cyrene as well with its antiquarian traditions. In *Pythian* 4, a vast virtuosic work of thirteen triads, there is a concatenation of medical imagery. King Arcesilas is likened to an ἰατὴρ ἐπικαιρότατος, “a most apt

healer”, honoured by Paian, and one who must apply a gentle hand to treat a sore from a wound (270–271); then it is added that ὁ γὰρ καιρὸς πρὸς ἀνθρώπων βραχὺ μέτρον ἔχει, “time for man has a brief span” (286). This is not a mere cliché. The word *kairos* (present already in the adjective applied to “healer”) had been appropriated by the medical profession, and the sentiment has close verbal as well as semantic parallels in the corpus. Further, in a typical Pindaric patterning, the myth of Cyrene, the eponymous nymph of the city, mother by Apollo of Aristaeus (*Pythian* 9) is a doublet of the myth of Coronis, mother by Apollo of Asclepius (*Pythian* 3). Thessaly is the locale for both myths; the centaur Cheiron is involved in both as observer, adviser or more active participant (*Pythian* 3.63; 9.29, 38–39). Cheiron, son of Kronos and Philyra, belongs in an ancient stratum of Greek myth (genealogies, Apollodorus 3.10.3). It was he who taught medicine to the heroes: not only to Asclepius, his star pupil, but also to Achilles (Homer, *Iliad* 4.219; 11.831–832). Centaurs are usually disparaged in Greek verse; but Pindar uses complimentary epithets of Cheiron, suggesting an ancient and powerful divinity (*Pythian* 4.119, “divine”; 9.38 “mighty”; *Nemean* 3.54–55, “wise”). That Thessaly is important in the origins of Asclepius cult is well known; the diffusion of the cult is more uncertain.²⁸ It is, however, certain that Cheiron pre-dated Asclepius in cult as well as in myth. A primitive rock inscription from Thera, mother city of Cyrene, has the name Cheiron (*IG* 12.3.360). The importance of Cheiron survives in names for various kinds of all-heal, known as Cheironeion, Asklepicion, Herakleion (Theophrastus, *HP* 9.11).

Considering the marked roughness of *Organ of Sight*, it may be conjectured that this whole treatise is based on the work of someone whose first language was not Greek and who was not entirely at home with the idiom. Particular oddities in use of prepositions are unlikely to come from vagaries in transmission; the idiomatic use of prepositions is peculiarly difficult for foreigners to master. Examples are: ἐν πολλῷ χρόνῳ ὕστερον (1.1); χωρεῖ ἐπὶ τὸ φλαυρότερον (1.1); ἀπὸ πρόσθεν (1.2); πλὴν τοῦ πάνυ πρὸς αὐτῷ τῷ ὁστέῳ (2.1); παρὰ τὸ ἄλλο (3.4); ὕστερον τούτου (4.2); μετὰ τοῦ ξηροῦ (9.3). We may add two

²⁸ Thus, one tradition had it that Cyrene acquired the cult from Epidaurus and gave it to Cretan Lebena (Pausanias 2.26). It is odd that at Cyrene Asclepius had the seemingly otiose cult title *Iatros*, doctor.

slightly unusual expressions from 9.1: συμφέρει πρὸς (found also *Epid.* 5 and 7, *Fract.*, *VC*) and σικύαι κατὰ τὰς φλέβας (found also *Acut.* and *Epid.* 2 for the regular σικύαι πρὸς). *Organ of Sight* is not cited by ancient compilers of glossaries, despite the presence of some unusual features in vocabulary.²⁹ The work is not mentioned by any ancient source. It may have had a different tradition, and a different route to the library in Alexandria where the Hippocratic Corpus took the form which became definitive. It may even have remained in Cyrene, a short step from Alexandria. Prominent Alexandrian scholars from Cyrene include Callimachus. Alternatively, one might speculate that a doctor from another region visited Cyrene to further his knowledge of eye diseases and treatments and that his notes, preserving the local idiom, have survived.³⁰

What can we conclude? The closest affinities in content and in language are with *Places in Man* (and, with it, *Glands*). The case for common authorship with *Affections* is uncertain. While *Affections* has resemblances with *Places in Man*³¹ and *Places in Man* has resemblances with *Organ of Sight*, it is less easy to find significant common ground between *Affections* and *Organ of Sight*, and the language (particles excepted) is quite different. Although the content quite closely resembles the content of the section on eye diseases in *Prorrhetic* 2, the language and style are in no way similar. When we turn to other works in the Hippocratic Corpus, various elements of common content can be traced. The closest is the account of “diseases affecting the head” of *Diseases* 2: several sections show strong similarities and the arrangement by headings is the same. There is a further nexus of associations with treatises which give recipes (*Diseases of Women* 1, *Regimen in Acute Diseases*); and still another with treatises where cautery is employed (*Affections*, *Internal Affections*, *Articulations* in addition to *Places in Man* and *Diseases* 2). In language, the most striking recurrent parallels are with *Places in Man* and with the gynaecological works, separately or together; there are also some elements peculiar to our

²⁹ An exception may be ἄτραπετον, glossed by Galen in the accusative; the only other known occurrence, *Int.* 28 (7.242 L.) is dative plural. See Anastassiou and Irmer (1997) 458–459.

³⁰ See Staden (1989) 206 T 90 on the “bad Greek” allegedly spoken by many in Alexandria and other regions in later times.

³¹ See Craik (1998) 234–235 on *Aff.* 61 ~ *Loc. Hom.* 41, different effects of same foods, and on other similar passages.

treatise and *Internal Affections*. Particular passages of the short work particularly resemble passages from the treatises mentioned: *Prorrhetic* 2 (1, 2 and 9), *Internal Affections* (3 and 5), *Diseases* 2 (4, 6 and 8), *Regimen in Acute Diseases* (6). There is some resemblance with some elements in *Epidemics* (6 and 9). Although in two cases, these similarities may facilitate emendation of *Organ of Sight*, where the transmitted text is problematical to the point of being meaningless,³² the nexus of interrelations must induce caution. Once again, the complex intertextuality of the tradition is demonstrated. The interrelation of its geographical origins may also be more complex than commonly supposed.

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³² A new edition of the text is projected.

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COAN PROMOTIONS AND THE AUTHORSHIP OF THE *PRESBEUTIKOS**

Eric D. Nelson

Summary

This article argues that the Presbeutikos Thessalou (Ambassadorial Oration of Thessalus), a seminal text of the Hippocratic pseudepigrapha, is an excerpt of the lost third century BCE historical work Ta Kôaka (History of Cos) of Macareus. It further argues that the rhetoric of the speech derives from ambassadorial speeches delivered by Coan embassies, of which Macareus was a member, on behalf of the Coan Asclepieion. It also suggests that the Presbeutikos' companion in the pseudepigrapha, the Epibomios (Speech from the Altar), may have a similar origin in Macareus' historical work.

The figure of Hippocrates has loomed over western medicine as the paradigm of the good physician in action and in thought. Yet scholars since Littré have become increasingly doubtful that we know what his actual contributions to Greek medical science and practice were, for it appears that the historical figure was rapidly obfuscated by the development of a traditional figure by the first century BCE.¹ The extent of this obfuscation, however, hinges largely on the role that two pseudepigraphic texts, the *Presbeutikos* ('Embassy' or 'Speech of the Envoy') and the *Epibomios* ('Speech from the Altar'), played in this process.² Smith and Rubin-Pinault suggest that these texts served as catalysts for the development of the traditional figure by

* My special thanks to Larry Bliquez, who patiently encouraged this work, and to my wife, Susan K. Nelson, who was instrumental in bringing both the argumentation and the text to its present form. All errors and obscurities that remain are mine.

¹ See discussions in Joly (1972); Jouanna (1999); Rubin-Pinault (1983 and 1992); Scarborough (1988); and Smith (1979, 1989 and 1990). All dates are BCE unless otherwise noted.

² The *Presbeutikos* (henceforth *Pres.*) = Corpus Hippocraticum, *Epistolai* (henceforth *Hp. Ep.*) 27; the *Epibomios* (henceforth *Epib.*) = *Hp. Ep.* 26. I refer to sections of these works according to the edition of Smith (1992).

imprinting an anonymous collection of medical writings with a largely fictitious (or at best unverifiable) picture of a heroic physician.³ Jouanna, on the other hand, claims the *Presbeutikos* as one of the more reliable sources concerning the historical figure.⁴ Both views make a closer examination of these texts a worthwhile endeavour.

My project here is to determine, insofar as possible, the date, origin, and authorship of the *Presbeutikos* (and, to a lesser degree, of the *Epibomios*), not to argue for the historicity of the details contained in the text(s). First, I argue that the *Presbeutikos* can best be dated to the mid-third century and, second, that it must be understood against the background of historical ambassadorial orations made by Coan embassies seeking *asulia* (inviolable status and protection for pilgrims) for the Asclepieion. Third, I argue that an evaluation of the *Presbeutikos* as a composition indicates that it, and most likely the *Epibomios*, is an excerpt of a historical work and, fourth, I identify *Ta Kôaka* ('The History of Cos') of Macareus as the source and Macareus as one of the primary ambassadors of the Coan embassies. I hope that my discussion contributes to a fuller understanding of the process of transformation from historical to traditional Hippocrates, and that the former sections might remain useful to those readers who will find the latter too speculative, even though the four sections form a complete and integrated argument. I begin with a brief summary of the *Presbeutikos* and with the arguments for dating.

DATING THE 'PRESBEUTIKOS'

The *Presbeutikos* is a fictitious ambassadorial address (*presbeutikos logos*) delivered by Hippocrates' son, Thessalus, to the Athenian assembly. The dramatic date is about 407, when Cos was an object of contention between the Spartan and Athenian fleets.⁵ Thessalus attempts to avert a pending Athenian attack by reminding the Athenians of four services that his Asclepiad and Heraclid ancestors performed for Greece in general and for Athens in particular. These services include:

³ Smith (1990) 2–18; Rubin-Pinault (1992) 5 and 42.

⁴ Jouanna (1999) 9.

⁵ See Nelson (1992) 16–23; Jouanna (1999) 36 tends toward 411–408. Either dramatic date suffices for the arguments of this paper.

1. Coan assistance to the Amphictyons in the First Sacred War;
2. Coan resistance to the Persians and Artemisia under the tyrant Cadmus;
3. Hippocrates' averting of a plague threatening Greece from Paeonia and Illyria; and
4. Thessalus' own participation in the Sicilian Expedition as an allied military doctor.

Against this detailed historical narrative, Thessalus appeals for discretion and clemency. He calls the Athenians' pending aggression unjust and unholy, and he entreats them to live up to their reputation and traditional good relationship with his homeland. He traces the theme of the Asclepiads' service back to Heracles, Asclepius, and the Homeric hero Machaon, and, should an Athenian attack be inevitable, he calls for the protection of the Asclepiads and their property. Finally, he warns his audience of the capriciousness of fortune and hints that other Heracleidai—Thessalians, Argives, Spartans, and the kings of Macedonia—may aid Cos if Athens pursues its attack.

Arguments for dating the composition have vacillated between a *terminus post quem* of 366 (Coan synoecism or political unification) and a *terminus ante quem* of c. CE 60 (Erotian's reference to both speeches),⁶ and rely on matching the rhetorical stance of the text with an appropriate historical moment. Herzog and Edelstein place the composition at 350 and 190 respectively,⁷ although they feel that the rhetorical nature of the text precludes a precise dating, Rubin-Pinault⁸ favours a dating closer to that of Herzog, while Smith, after weighing the evidence, favours a date c. 250.⁹

However, while the text's rhetorical *stance* may fit various historical moments, I will argue that an analysis of rhetorical *content* and *form* yields better precision. In the first case, it shows that the story of the 'Calydonian Man', which is embedded into the First Sacred War narrative, strongly favours dating the text to the mid-third century. In the second, an analysis of the *Presbeutikos*' unusual combination of form and content shows that it is analogous to specific

⁶ Nachmanson (1918) 9.

⁷ Herzog (1899) 215 ff.; Edelstein (1935) 1305.

⁸ Rubin-Pinault (1992) 41–42 and (1983) 81–82.

⁹ Smith (1992) 6–7.

Coan ambassadorial orations composed and delivered in the mid-third century. Let us then begin with the *Presbeutikos*' anonymous Calydonian hero.

The Anonymous Hero

The story of the 'Calydonian Man' is the most prominent of several textual features that appear to locate the *Presbeutikos* in the third century.¹⁰ It occurs in the long historical narrative of the First Sacred War, in which Thessalus claims that the Asclepiads Nebrus and his son Chrysus assisted the Amphictyons fighting the First Sacred War and brought along an unnamed 'Calydonian Man' (Καλυδώνιον ἄνδρα).¹¹ The purpose of this seemingly extraneous detail becomes clear when the author cites Delphic privileges for the Calydonians as evidence of the truthfulness of the events as he has described them:

Ἀσκληπιάδῃσιν δὲ τοῖσιν ἐκ Κῶ ἐδόθη Νέβρου χάριτι προθυμίῃ πρὸς μαντεῖην, καθάπερ τοῖσιν ἱερομνήμοσι, Καλυδωνίοισι δὲ ἀπ' ἐκείνου τοῦ ἀνδρὸς καὶ ἐκείνης τῆς ὑπουργίης καὶ νῦν ἐν Δελφοῖσι προμαντεῖται καὶ αἰετιστὴ δέδοται. Ἄλλ' ἐπάνειμι ἐπὶ τὰ ἡμέτερα.

And so the right of consultation of the oracle was awarded to the Asclepiads of Cos for the service of Nebrus (just as it is for the hieromnemes); but to the Calydonians, for that man and that assistance—even now in Delphi—the right of first consultation and perpetual board has been granted. But I proceed to our own affairs.¹²

Pres. 4 (p. 114,27–30 Smith; 9.412 L.)

Although privileges for the Asclepiads at Delphi have been confirmed and are the focus of some interest,¹³ what the *Presbeutikos* says about the Calydonian privileges is more important for dating the composition, for the author uses them to buttress his claims concerning

¹⁰ For others, see Nelson (1992).

¹¹ *Pres.* 4 (p. 114,4–5 Smith = 9.412 L). See Forrest (1956); Davies (1994); and Brodersen (1991) for discussions of the murky tradition and its historicity.

¹² All translations are mine unless otherwise noted.

¹³ *SEG* XVI 326, dated c. 350, confirms *promanteia* to patrilineal Coan (and Cnidian) Asclepiads (published by Bousquet (1956) 579–593 and Sokolowski (1962)). Jouanna (1999) 33–34 takes this as evidence for the historicity of *Pres.* 4 (p. 114,27 Smith = 9.414 L). For counter-arguments see Smith (1992) 15–16.

Coan privileges and to lend credibility to his account of the war.¹⁴ Such use implies that the Calydonian privileges were better known than the Coan privileges—and, the text implies, currently in place¹⁵—at the time of the *Presbeutikos*' composition. I will argue that this time (i.e. the period when these 'Calydonian' privileges would most likely gain the recognition upon which the author's argumentation depends) coincided with the Aetolian League's domination of Delphi and the surrounding Amphictyony (278–226).

But, to begin, why identify Aetolia with the Calydonian hero? Calydon does not figure prominently in Delphic history, nor does any epigraphic evidence (to my knowledge) record privileges for Calydonians at the shrine. Calydon was, however, central to Aetolia, whose league played an important role around Delphi, from Philip II through to Philip V. This league was not a centrally controlled federation but a joint association of Aetolian towns, whose meeting place moved among its members. However, heroes are generally associated with a specific locality and *polis*. Calydon, the religious centre of the Aetolian League,¹⁶ was generally synonymous with the region.¹⁷ Therefore, although Calydon—not Aetolia—features in the *Presbeutikos*, a Calydonian hero could easily represent the Aetolians in general.

The puzzling anonymity of the Calydonian does not stand in the way of this identification. It is possible, given the uncentralised nature of the Aetolians, that the author was either unable or unwilling to name the character. On the other hand, perhaps the 'Man of Calydon' was a less anonymous reference than it appears. Theocritus (17.54) calls Diomedes 'the son of Tydeus, that man of Calydon' (*andra Kaludōnion*), and this family already figured prominently in myths of

¹⁴ The author also indicates this at *Pres.* 4 (p. 114,4–5 = 9.412 L): 'And Chrysus brought along a Calydonian man . . . concerning whom my story will clarify when the need has come.' (Συνέβησε δὲ ὁ Νέβρος οὗτος καὶ Καλυδώνιον ἄνδρα . . . ὑπὲρ οὗ τὸ αὐτίκα ὁ λόγος δηλώσει, ὅταν ἡ χρῆσις ἔλθῃ).

¹⁵ I take the use of καὶ νῦν ('even now') in a story serving as evidence for the reader to indicate that the Calydonian privileges were also active in the author's present.

¹⁶ The Aetolian temples of Apollo and Artemis Laphrios were there (Strabo 10.2.21).

¹⁷ Thucydides 3.102; Xenophon, *History of Greece* 4.6.1.1; and Euripides, *Fragments* 515.1 and 558.2, Strabo 10.2.22 and 12.3.6 and Plautus, *The Young Carthaginian* 74 use the name 'Calydon' for the region as well as the city.

the region. Perhaps, just as the Coan Nebridai wove Nebrus and the Athenian Alcmaeonidai wove Alcmaeon into the story of the First Sacred War,¹⁸ Aetolian nobility claimed a role for a mythic ancestor, who in our version goes unnamed and, hence, unrecognised.¹⁹

In any case, the story of the Calydonian privileges, if understood to refer to the Aetolians, has an easily marked trail, from origin in the fourth century to probable popularity in the third. A fragmentary inscription, dated to 338,²⁰ grants the Aetolians *promanteia* (the right of first consultation of the oracle), *proedria* (precedence of place), and *ateleia* (exemption from financial obligations). This close match to the *promanteiê kai aieisitiê* (right of first consultation and perpetual free board) claimed by the *Presbeutikos* for the Calydonians probably constitutes the privileges to which the *Presbeutikos* refers.

There was a long-standing Delphic tradition of validating an award of privileges with a mythological or historical precedent.²¹ The Aetolian League's involvement with Delphi went back to the period of the Third Sacred War, when they became allies of Philip II in his subjugation of central Greece.²² Philip's victory over the Phocians was widely portrayed as a symbolic as well as an historical analogue to the First Sacred War. Like the Thessalians (who led the First Sacred War), he took a prominent place in the Amphictyony and the honour of hosting the Pythian games. After Chaeronea, Philip rewarded the Aetolians by returning Naupactus to them²³ and, it appears, arranged for the 'Philippising' shrine to grant them the privileges recorded on the inscription in 338. The Aetolian League's assistance to Philip, especially in this symbolically charged environment, probably marked the genesis of the story of the 'Calydonian Man'. His ancillary role may reflect the Aetolians' role, or simply that he was

¹⁸ For Nebrus see Sherwin-White (1978) 169 and Parke and Boardman (1957) 276–282; for Alcmaeon see Aeschines 3.107.

¹⁹ There is evidence that noble Aetolians of the period traced their lineage back to such mythological roots. A particular case is the famous second century Aetolian envoy Thoas (Polybius 21.14, 22.26, 28.4), whose name recalls the Homeric Calydonian King (*Iliad* 2.638).

²⁰ *SEG* XVII 238, reconstructed and interpreted by J. Bousquet (1957); for dating of the archonship of Sarpedon see G. Daux (1943) F. 2.

²¹ Individuals include Croesus (Herodotus 1.54) and Philip II (Demosthenes 9.32); for Spartan, Phocian, Thessalian and Athenian privileges see Latte (1962) and Parke and Wormell (1956), Vol. 1, p. 31.

²² Diodorus Siculus 16.69.8; Ellis (1976) 191.

²³ Demosthenes 9.34; Philochorus F 56; Strabo. 9.C.427; also Ellis (1976) 158.

a late appendix to an already full and well-known tradition. It seems likely, therefore, that the 'Calydonian Man' and the Calydonian privileges found their place in the story of the First Sacred War around 338.

The Aetolians' relationships with Greece, however, deteriorated rapidly after 338 to the point where they isolated Delphi,²⁴ until a mainly Aetolian contingent defended the shrine from an invading army of Celts in 279.²⁵ This incident impressed itself on the era as a great event of Hellenic history,²⁶ ended the stalemate, and provided the Aetolian League with enormous prestige. The Aetolians celebrated a *sôtêria* (festival of thanksgiving for deliverance) that brought them into direct contact with states such as Cos, and, at long last, they gained access to the Amphictyonic council. Over the next fifty years, the Aetolians expanded both their territory and their power within the council by usurping the votes over lands incorporated into their dominion, aided in large part by a *détente* with Antigonus Gonatas and by the resumed participation of Athens and Sparta in the Amphictyony.

Not only is it during this period (namely, from the celebration of the *sôtêria* in 278 until the Aetolians' curtailment by Rome in 226) that stories influenced by the Aetolians were most likely to become widely recognised,²⁷ but this is also the most likely period for a Calydonian hero to become intermingled in a Coan tale. 278 was also the inaugural year of the Coan Asclepieion and the beginning of a sustained period of Coan interest in common ties between the island and Greece.²⁸ The Coans (whose relations with Delphi went back at least into the fifth century)²⁹ established close ties with the League in 278, decreeing extraordinary thanksgivings, in parallel at Delphi and Cos,

²⁴ Philip and his immediate successors kept the Aetolians out of the Amphictyony and checked their expansion (Ellis (1976) 201; Hammond and Walbank (1988) 126–127). For Delphi's isolation and the Greeks' backlash see Bousquet (1957) 493–494; Hammond and Walbank (1988) 224.

²⁵ Pausanias 10.20.6–23.14.

²⁶ E.g. Polybius 1.6.5, 2.10.6; Cicero, *Oration for Marcus Fonteius* 14.30. See also Parke and Wormell (1956) vol. 1, 259.

²⁷ There is evidence of Aetolian influence on Delphi's popular mythology in this period, such as the quick addition of their patron goddesses, Artemis and Athena, to popular renditions of the Celt's defeat (see Flacière (1937) 100 ff.; also Parke and Wormell (1956) Vol. 1, 258 ff.).

²⁸ See below, *Coan ambassadorial speeches and the Presbeutikos*.

²⁹ Sherwin-White (1978) 301.

for the shrine's safety.³⁰ It also bears noting that third century naval interests provided additional means through which common traditions could become intertwined and sustained.³¹ All these enterprises, then, which occurred *within* the third century, offered both the particular motivation and fertile opportunities to integrate common traditions. Accordingly, even though the inclusion of a 'Calydonian Man' in the story of the First Sacred War is a creation of the late fourth century, the appearance and use of this character in the *Presbeutikos* is a creation of the third.

THE PRESBEUTIKOS AND THE THIRD CENTURY COAN PROMOTION OF THE ASCLEPIEION

There are, moreover, unique analogues to the *Presbeutikos*' odd combination of rhetorical form and content that both support this dating and contextualise its composition. These are the speeches of Coan *theôroi* (sacred ambassadors) seeking pan-Hellenic *asulia* for the Asclepieion from its founding in 278 through to its dedication in 246. *Asylieurkunden* (grants of *asulia*), decrees from around the Greek world, testify to a concerted, protracted, and largely successful campaign.³² I will argue that an analysis of these decrees indicates that the Coan ambassadors relied upon argumentation similar to that of the *Presbeutikos*. I will then argue that consideration of the *Presbeutikos* as a composition suggests that it is an excerpt of a historical work. However, since both arguments involve a common discussion of the *presbeutikos logos* (ambassadorial address), I turn first to a short overview of this kind of oration and its place in the history of Greek rhetoric.

³⁰ Sherwin-White (1978) 302. For the inscriptions, see *Syll.*³ 398 (edited by Herzog (1904) 164–73; Nachtergaele (1977) 401–403; and Austin (1981) 93–94).

³¹ The Coans, ever concerned for naval commerce (e.g. Welles, *Royal Correspondence* (henceforth *RC*) 25, lines 33–34 and 123), had reason to foster stories of goodwill and cooperation with the Aetolians, who controlled the largest pirate fleet in the Aegean during this time (Hammond and Walbank (1988) 283; Flacière (1937) 196–204). One can gauge Aetolian influence from the treaty signed with the Chians in 246 (Herzog, *Syll.*³ 443 (= Moretti II 78), dated c. 247/6).

³² Published in *SEG* XII 368–84; Herzog and Klaffenbach, *Asylieurkunden* (henceforth *Asyl.*); and Welles, *RC*. See Sherwin-White (1978) 111–114 for an overview and discussion.

The Presbeutikos Logos

The *presbeutikos logos* received relatively late—and relatively little—systematic treatment by Greek rhetoricians. Demetrius of Phaleron, the rhetorician and governor of Athens, reportedly was the first to discuss ambassadorial speaking, and composed an *exemplum* around 322.³³ No Hellenistic works of theory or exercises of practice devoted to *presbeutikoi logoi* remain, although Polybius' criticisms of Timaeus (12.25a3) presuppose some. It nevertheless appears that rhetoricians primarily relied on models taken from the historians³⁴ until the advent of the Roman imperial court, when orators had to envision the ambassador speaking before an imperial figure.³⁵

We must, therefore, turn to the many examples contained in histories to learn the elements of the *presbeutikos logos*.³⁶ A comparison of these examples demonstrates that the ambassador's primary concern was to present his request in a favourable historical narrative that highlighted positive aspects of the relationship between the two states. He gave special emphasis to any favours—historical or mythological—done by his state for the other³⁷ and, if possible, brought supporting historical evidence such as oaths and treaties to bear upon the issue.³⁸ The ambassador then argued that his state's policies were not only just and consistent with the relationship represented in the historical proofs, but also worked to the advantage of the other state. In the peroration, the ambassador challenged the audience to be consistent with the tradition emphasised in his historical narrative.³⁹ Many speeches emphasised the unpredictability of fortune as a caution, illustrated (when possible) by the historical experience of either state.⁴⁰ Where retribution upon his state remained likely, the ambassador

³³ Diogenes Laertius 8.80–81; Kienast (1973).

³⁴ Kennedy (1983) 21; for a manuscript of excerpted *presbeutikoi logoi* see de Boor (1905).

³⁵ E.g. Menander Rhetor 423.6–424 (see Russell and Wilson (1981) 180–182, 337).

³⁶ Wooten's synthesis (1973) largely informs my summary here.

³⁷ This element was so standard that Polybius, who heard many such speeches in Rome, simply abbreviates it at 21.22.5. Compare also Xenophon, *History of Greece* 3.5.7–15; Aeschines 2.26–30; and Polybius 9.28–32.

³⁸ E.g. Thucydides 2.71 and 6.82–87; Xenophon, *History of Greece* 3.5.8–15, 6.3.12–18 and 7.1.2–11.

³⁹ E.g. Hdt. 8.143, Thuc. 2.71 and Aeschines 2.33.

⁴⁰ E.g. Thuc. 4.17–20; Xenophon, *History of Greece* 6.3.3–18; Polybius 11.2.4–6.

appealed for actions limited to culpable persons and argued that his state, misled or oppressed by ringleaders, ought to be treated mercifully overall.⁴¹ Historical speeches also provided examples of what to avoid, such as talking too long for the audience, or inappropriate and ineffective uses of praise and blame.⁴²

Coan Ambassadorial Speeches and the Presbeutikos

Although we do not possess the Coan ambassadors' orations themselves, a number of *asylieurkunden* decrees provide commentary upon them. This commentary, even in its fragmentary state, indicates that the Coan ambassadors engaged in a sophisticated effort to secure recognition for their shrine by emphasising, depending on their audience, different aspects of Coan politics, history and mythology. It also suggests, when combined with what we know of ambassadorial speaking and of Coan history, that the ambassadors to Greece, Macedon, and Sicily used argumentation similar to that of the *Presbeutikos*.

The Coans, whose island lay on the fault line between competing regional powers, had a delicate task in claiming a pan-Hellenic role for their shrine. There were, however, contemporary forces that gave Coan traditions a broad *cachet*. The birth of Ptolemy Philadelphus on Cos in 308 had generated interest in the island, and the works of Philetas (chosen to be Philadelphus' tutor), Theocritus and Callimachus created popular exposure for Coan traditions.⁴³ The ambassadors would have to capitalise upon this exposure as a part of their enterprise to demonstrate Coan *eunoia* (goodwill) toward audience states.

In the East, the Coans relied on a straightforward strategy. Connections between Cos and Alexandria were deeply established and broadly recognised,⁴⁴ and replies show that the Coans leaned hard on these connections even in outlying areas.⁴⁵ In the West,

⁴¹ E.g. Xenophon, *History of Greece* 3.5.8–15; Polybius 21.31.6–16, 30.30.12–18 and 30.31.3.

⁴² Such as the Samian who receives a lesson in brevity (Hdt. 3.46) and an illustrative contrast of three speeches (Xenophon, *History of Greece* 6.3.3–18).

⁴³ E.g. Philetas (in Powell (1925) 90–95); Theocritus, *Encomium to Ptolemy* 7.91, 17.112; Callimachus, *Hymn to Delos* 160. See also Easterling and Knox (1991) 546 ff.

⁴⁴ Sherwin-White (1978) 84, 102–107 and 288.

⁴⁵ Welles, *RC* 25 (The letter of Ziaelas of Bythina) = *Asyl.* 8.

however, the Coans had to persuade a fractious conglomeration of cities, leagues, and empires, many of which were suspicious of, if not openly hostile to, Ptolemy and his allies. Replies reveal what looks to be a Coan strategy of building momentum by using teams of ambassadors in extended 'whistle-stop' tours. One team of three ambassadors covered the Peloponnesus,⁴⁶ moved through into Thessaly⁴⁷ and central Macedon;⁴⁸ two of the three continued into northern Macedonia.⁴⁹ Other embassies went to Sicily⁵⁰ and Magna Graecia.⁵¹ Additional evidence of the Coans' wide-ranging efforts comes from a third-century inscription by the Thessalian *koinon* at Itanos, which attests to the Coans having previously been in Argos, Chios and Samothrace,⁵² and from a royal letter that indicates the previous approval of the Delphic Amphictyony and probably of Athens.⁵³

In areas under Antigonid control, the Coan ambassadors played up dynastic favour as they had in the East. These replies consistently cite *eunoia* toward 'King Antigonos and the rest of the Macedonians' as a reason for granting *asulia*.⁵⁴ Nevertheless, it is clear that, throughout the West, proofs of goodwill were more difficult to martial. No doubt the Coans had historical hurdles to overcome: given their service to Artemisia, Mausolus, Ptolemy and Arsinoe, their record of *eunoia* to the West was questionable. Replies comment that ambassadors 'spoke at length' (*apologizesthai*)⁵⁵ and 'revealed' (*emphanizein*)⁵⁶ or 'disclosed' (*manuein*)⁵⁷ Coan *eunoia*. The historical nature of their arguments is alluded to in language relating that the Coans 'brought about a renewal' (*ananeuein*)⁵⁸ of '(pre)-existing'

⁴⁶ *SEG* XII 371 = *Asyl.* 4 (Sparta, Messina, Thelphusa, Elis, Aegira).

⁴⁷ *SEG* XII 372 = *Asyl.* 5 (Megara, Homolion, Phthiotic Thebes).

⁴⁸ *SEG* XII 374 = *Asyl.* 7 (Pella, an unknown city).

⁴⁹ *SEG* XII 373 = *Asyl.* 6 (Cassandra, Amphipolis, Philippi).

⁵⁰ *SEG* XII 370, 379–80 = *Asyl.* 3, 12, 13 (Syracuse, Camarina, Phintia).

⁵¹ *SEG* XII 377–378 = *Asyl.* 10, 11 (Corcyra, Neapolis, Elea).

⁵² Quoted by Sherwin-White (1978) 110, n. 141; edited by Boesch (1908) 28.

⁵³ *Asyl.* 2.8–13 (from an unknown king). See Sherwin-White (1978) 111–114 and n. 164.

⁵⁴ *Asyl.* 6.13, 30, and 41; 7.12. For individual services a generation back see Sherwin-White (1978) 85–90; Hammond and Walbank (1988) 157–161.

⁵⁵ *Asyl.* 6.3 and 7.5–6.

⁵⁶ *Asyl.* 6.4 and 42.

⁵⁷ *Asyl.* 4.10.

⁵⁸ *Asyl.* 7.3.

((*pro*)*huparchousa*)⁵⁹ friendly relations (e.g. *oikeiotês*) and that, when possible, the Coans also advanced arguments of kindred descent (*sungenês*).⁶⁰

Although this language indicates that the ambassadors worked hard for their proofs, it also shows that they were extremely well prepared. These sequential tours would have required a set of general proofs that were adaptable through omission or emphasis to most audiences and, where necessary, a few particular proofs suitable to particular audiences. In situations where particular facets of Coan history might actually have harmed their case, the ambassadors would have needed to skirt them or to provide some sort of apologetic counter-proofs.

So, what arguments did the Coans have? Besides a few particular services to Macedon,⁶¹ the Coans had limited historical and mythological traditions from which to form arguments. They had Doric traditions linking Cos to Thessaly and to other Greek Heracleidai. They had the Coan tyrant Cadmus, who opposed the Persians and fled with other loyal Greeks to Sicily.⁶² They had the Coan Asclepiadai, whose long-standing relationship with Delphi presupposes the development of favourable historical and mythological traditions. They had, as well, the well-known Coan physician Hippocrates and his familial ties to Thessaly. They had, in short, the arguments of the *Presbeutikos*.

Indeed, speakers could adapt these arguments, much as the author of the *Presbeutikos* has done for his dramatic audience, throughout the West. The story of Cadmus and his followers is a case in point. In western Greece, this story would serve primarily as an apology for the Persian War, just as it appears in the *Presbeutikos*. In Syracuse, however, the proof would also constitute a historical proof of friendship and service. A particularly detailed reply from a king of Syracuse comments extensively upon the Coan speeches and suggests that the

⁵⁹ In Syracuse, the ambassadors used historical argumentation 'from remote antiquity' (*ek palaiôn men chronôn*; *Asyl.* 3.37); in Homolion they appealed to their 'friendship from of old' (*philian . . . ex archês*; *Asyl.* 5.24). See also *Asyl.* 3.31; 4.11; 6.40; 7.3; 12.20; 13.16.

⁶⁰ *Asyl.* 3.23, 29, and 32; 4.6; 5.14; 12.11, 20; 13.9, 20.

⁶¹ See note 34. These proofs were unavailable to the author of the *Pres.* because of its dramatic date.

⁶² *Hdt.* 7.164; *Hdt.* 6.18 and *Thuc.* 6.4 indicate that a variety of Ionians accompanied Cadmus.

Coan ambassadors probably did utilise the story of Cadmus in this fashion.⁶³

The other historical proofs of the *Presbeutikos* are adaptable in a similar manner. The story of Coan service in the First Sacred War could be a general proof of *eunoia* throughout Greece, but particularly in Aetolian-controlled areas (such as the audience in Phthiotic Thebes), at Delphi, and in the other Amphictyonic states.⁶⁴ Hippocrates' clever aversion of a plague from the north,⁶⁵ another general demonstration of the Coans' secure loyalties against Barbarian threats, could find special emphasis in Thessaly and Macedon; his traditional ties to Thessaly probably also received major emphasis there.⁶⁶ In Athens, ambassadors could add the story of Thessalus' (and Hippocrates') eager assistance in the Sicilian Expedition; in Syracuse they certainly omitted it. In addition, the *Presbeutikos* narrative contains a strong element of Dorian traditions that could be brought forward for appropriate audiences.⁶⁷ Accordingly, the Coans emphasised bonds of kinship in many areas where the oration claims wide-ranging Heraclid ties.⁶⁸

It seems likely, therefore, that the *presbeutikoi logoi* of the Coan ambassadors and the *Presbeutikos* share a very specific combination of content and argumentation that is situated in the mid-third century. If so, the similarity with the historical speeches offers us a view into the emergence of the traditional figure of Hippocrates. Understanding this view, however, depends upon understanding of the text as a composition, and so I turn to considerations of why the author composed the *Presbeutikos*, of how he conceived of the text, and of the author himself.

⁶³ *Asyl.* 3. The ambassadors emphasised historical proofs of kinship and friendship from antiquity forward, which surely included the story of Cadmus.

⁶⁴ As at *Pres.* 1 (p. 110,10–11 Smith = 9.406 L).

⁶⁵ See Rubin-Pinault (1992) 43–44 on how this episode came to be identified with Thucydides' plague, but Jouanna (1999) 32–33 on the possibility of another event behind the story.

⁶⁶ As at both *Pres.* 7 (p. 118,6–7 Smith = 9.418 L) and in the *Epib.* (p. 108,17–18 Smith = 9.404 L).

⁶⁷ E.g. *Pres.* 4 (p. 114,7–9 Smith = 9.412 L); 5 (p. 116,4 Smith = 9.414 L); 6 (p. 116,24–25 Smith = 9.416 L); 7 (p. 118,15 Smith = 9.418 L); 9 (p. 122,9–10 Smith = 9.424 L); and 10 (p. 124,3–5 and 26–27 Smith = 9.426 L).

⁶⁸ See note 60.

THE PRESBEUTIKOS AS A COMPOSITION

The unusual content of the *Presbeutikos* has led to the general assumption that the author composed it as a kind of rhetorical promotion of the Asclepiads.⁶⁹ However, as we have seen, the *Presbeutikos* also has an unusual rhetorical form and an unusual dramatic setting.⁷⁰ A consideration of these three facets should converge on a common purpose, depending on which of the three was the primary factor in composition.⁷¹ I will argue that the author wrote the *Presbeutikos* neither as a vehicle of promotion nor as a rhetorical exercise, and I will propose that the *Presbeutikos* was originally composed as a part of a historical work. This solution not only provides the best explanation for the text but also explains in the best way the missing contextual links between the *Presbeutikos* and its companion in the pseudepigrapha, the *Epibomios*.

The Presbeutikos as Promotion or Propaganda

Let us suppose that the author's primary purpose *was* to promote the Asclepiads, and that he chose to write a *presbeutikos logos* to accomplish that goal. It would have been an odd choice. Many rhetorical compositions were vehicles of promotion but comparatively few of these were deliberative, because deliberative speeches, which were to remain focused on the action to be taken, did not allow scope for eulogistic digressions.⁷² In *presbeutikoi logoi*, for example, ambassadors had to be careful not to praise themselves or their causes too much. Thus, while no one would deny that there is an element of promotion in the *Presbeutikos*, one wonders why the author would choose

⁶⁹ No doubt the Coans were 'promoting' the Asclepicion in the sense of 'advancing the case for *asulia*', and I freely use the term in this sense. However, in this section I use 'rhetorical promotion' and 'vehicle of promotion' to specify a composition whose primary objective is the aggrandisement of the Asclepiads or Cos, without subordination to another purpose, as Sherwin-White (1978) 15; Smith (1990) 5–16; and Rubin-Pinault (1992) 39 and (1983) 78–83.

⁷⁰ While both the physical location and historical context pertain to 'dramatic setting', I focus here primarily on the latter aspect.

⁷¹ I.e., if the author wrote primarily to promote the Asclepiads (content), the form and dramatic setting should—on balance—be subordinate to this goal; if primarily to practice or teach the *presbeutikos logos* (rhetorical form), the content and the dramatic setting should be subordinate, and so forth.

⁷² See Goldstein (1968) 284–286.

a kind of speech that limited his primary objective. Perhaps the historical *presbeutikoi logoi* gave the form and content a certain popular appeal. Even so, the awkward match of primary intent and rhetorical form should reveal itself under scrutiny.

Examination, however, shows that the author is fully aware of his rhetorical limitations. The *Presbeutikos* is a model ambassadorial address⁷³ and remains explicitly deliberative in character⁷⁴ before the Athenian *ekklēsia* (assembly). The assembly had notoriously high rhetorical expectations, placing restrictions on deliberative speeches (*dēmēgorika*) around 345 that led both Aristotle and Isocrates to consider such speeches unsuitable for expressing self-interest and rhetorical display.⁷⁵ These restrictions demarcate the rhetorical parameters for this demanding dramatic audience, within which the author writes.⁷⁶

What then of promotion? If the author's primary concern was to promote the Asclepiads, it appears that he chose a kind of speech not well suited—and placed it in a dramatic setting even hostile—to that purpose. It might be argued that the author was unaware of these incompatibilities, but he displays his awareness of them by composing within the restrictions that work against his (supposed) intent for composing the piece. Such a paradox forces one to reconsider the original supposition and conclude that promotion of the Asclepiads—as conspicuous as they are—cannot be the primary motivation for composing the *Presbeutikos*. It appears, on second thought, that composing in the rhetorical form was a higher priority than the content.

⁷³ Cf. the outline of a *presbeutikos logos* in *The Presbeutikos Logos* (above) with the synopsis of the *Presbeutikos* in *Dating the Presbeutikos* (above).

⁷⁴ See especially *Pres.* 9 (p. 120,31–33 Smith = 9.424 L), where the author adapts the historical question, 'Should *x*, given Coan *eunoia*, grant the Asclepieion *asulia*?' to the dramatic question, 'Should Athens, given Coan *eunoia*, attack?'

⁷⁵ Aristotle, *Rhetoric* 1354 a 19–1355 a 4; Isocrates 15.8. Goldstein (1968) 100–132 (especially 111–112 and n. 82) discusses the restrictions and their dating.

⁷⁶ Since both speeches share common purposes, stylistic restrictions, and venues, the delivery of an effective *presbeutikos logos* before the Athenian assembly would need to parallel an effective (and legal) *dēmēgorika*, whether or not these restrictions *legally* bound an ambassador. Thessalus apologises for long-winded and fanciful (*makrotera kai muthodestera*) proofs delivered in a 'somewhat old-fashioned' manner (*pōs archaiōs*, *Pres.* 2, p. 110,21–23 Smith = 9.406 L; Alcibiades makes a similar apology at *Thuc.* 6.16–18 and uses *praeteritones* (rhetorically highlighted omissions) and other rhetorical devices in keeping with a *dēmēgorikon*.

The Presbeutikos as a Rhetorical Composition

Let us suppose, therefore, that the author wrote the *Presbeutikos* primarily as a *presbeutikos logos*. If so, this would make the *Presbeutikos*, written about a century after Demetrius' initial discussion, the earliest extant exercise in this form.⁷⁷ There is evidence of rhetorical 'school' training in Cos;⁷⁸ perhaps this speech was a model for students or a display of the author's own skill (although it seems incongruous to these purposes that the *Presbeutikos* is—within its dramatic setting—a failure). Nevertheless, since rhetoricians often served as ambassadors, one might reasonably postulate that the author's skill came (like Demetrius') from ambassadorial speaking in practice. If so, the author's practice seems informed by the embassies recorded in the *asulia* decrees. Although I do intend to argue that this was the case, I wish, for the moment, to remain focused on the *Presbeutikos* as a rhetorical text and on the practice of rhetorical composition.

Rhetorical compositions ranged from subsections of speeches (*progumnasmata*)⁷⁹ and representations of what a given character might say under certain circumstances (*ethopoiai*)⁸⁰ to reproductions of complete orations (*meletai* or *declamationes*).⁸¹ Freed from real situations, school and performance compositions tended to elevate rhetorical display over other considerations, and a fondness for the pathetic and ironic often led to absurd themes or shocking conclusions.⁸² Nevertheless, some rhetorical works are quite realistic and a few became linked with genuine works.⁸³ It seems reasonable to infer that this is how

⁷⁷ Kohl (1915) catalogues Greek and Latin declamations on historical or mythological themes. All *presbeutikoi logoi* were composed during the Roman Empire.

⁷⁸ Herzog (1899) 212–213.

⁷⁹ E.g. the work of Theon (Waltz, *RG* I 137–257). See the discussions by Kennedy (1983) 54–73 and (1999) 26–28.

⁸⁰ E.g. Aphthonius: Kohl 10 = Spengel, *RG* II 45.9 (Achilles speaks to Patroclus).

⁸¹ E.g. the *Declamationes* of Libanius.

⁸² Nearly 700 years of rhetorical *angst*—from Aristophanes' *Clouds* to Synesius' *On Dreams*—only confirm the enduring appeal of this tendency. See Russell (1983), 36 ff., who ingeniously creates the imaginary city 'Sophistopolis' as a set to illustrate declamation's melodramatic world.

⁸³ The 'Leuctrian' orations 11–15 of Aristides are particularly realistic (Russell (1983) 4 n. 11, and 113 f.). Parts of the corpus of orators (see Dover (1968) and de Falco (1954)); the *On Politics* (*Peri Politeias*) of Herodes Atticus (Albini (1968) 11–26); and the so-called 'Letter of Philip' that accompanies Demosthenes 18 (perhaps an excerpt of the history of Anaximenes of Lampsacus) exemplify the intermingling of rhetorical and genuine compositions.

the *Presbeutikos*, if the author composed it as a rhetorical text, found its way into the Hippocratic corpus.

However, the dramatic setting does not fit the general practice of rhetorical composition, in which well-known themes were set in well-known mythological or historical moments.⁸⁴ Famous episodes of the Peloponnesian War (especially deliberations concerning the Sicilian Expedition and speeches by Alcibiades)⁸⁵ were favourite settings, and the author could have exploited them for their impact and recognition. Instead, he chose an obscure moment.⁸⁶ This moment may indeed be significant for the speech (since the Athenians attacked Cos shortly thereafter), and one might accordingly understand the author using this obscure setting if it were clarified and turned toward a rhetorical advantage. Neither is the case. Thus, both the obscure dramatic setting and the fact that the embassy is a failure in the dramatic setting rather undermine the case for the speech being a rhetorical composition.

The Dramatic Setting of the Presbeutikos

At such an impasse, one is tempted to throw up the hands and claim that the author was awkward when he set the piece. Yet, considered in relation to the dramatic setting, the placement is hardly awkward. On the contrary, the dramatic setting throws a backlight on the *Presbeutikos* that reinforces the didactic and deliberative aspects of the oration, while the content and form bring the argument of the speaker, the decision of the audience, and the consequences of the decision into dramatic relief. Alcibiades' recent successes and impending attack add suspense; Athens' eventual defeat lends poignant irony to the speaker's arguments regarding the inability of arrogant power to anticipate disaster, the capriciousness of fortune, and the potential attack of the Heracleidai. Thus it would appear that the dramatic setting was the controlling factor in the composition of the *Presbeutikos*.

⁸⁴ Russell (1983) 107 and Clark (1957) 221–222. Kohl's list contains only four examples that involve embassies or an ambassador from the historical period (47, 138, 149, 200); none is analogous to the *Pres*.

⁸⁵ Kohl 130–163; 110–122, 124b–129, 141–146; 112–129. On Alcibiades see Kohl 34 and Russell (1983) 123 ff.

⁸⁶ See above, n. 5.

But, where *is* the dramatic setting? Not in the speech, which treats it as something already known to the reader. Indeed, this is why rhetorical compositions were set in a small number of well-known situations: so that audiences or readers could immediately appreciate the composition within its context. Even the pseudepigraphic texts that found their way into the corpus of Demosthenes, Plato, or the orators emanate from a focal point (such as an already existing text or a well-known episode in the author's life) that a reader is likely to know. Here, however, it is problematic that the dramatic setting cannot be operant for the reader because of its obscurity. If it were clear, the *Presbeutikos* as an oration, a composition, and a piece of literature would make a great deal more sense. The problem, then, is not the dramatic setting *per se*, but the fact that the dramatic setting, which should be explicit were the speech designed to stand alone, remains implicit.

The Presbeutikos as an Excerpt

Such a realisation suggests a reconsideration of the assumption that the *Presbeutikos* was originally composed as an independent text, and the practice of excerpting *presbeutikoi logoi* from historical works suggests a possible origin. This hypothesis both resolves the problems of composition (in a manner that has precedent for this kind of speech) and provides an elegant solution to other tensions inherent in the *Presbeutikos*.

If, for example, we put the problems of dramatic setting aside, the speech remains out of step with other rhetorical *presbeutikoi logoi*, which explore carefully paired speeches⁸⁷ or place the ambassador before a figure who could represent the emperor (e.g. Achilles, the Great King).⁸⁸ While it is true that all of these come from the Roman period, the complete lack of earlier examples seems to indicate that historical excerpts provided sufficient *exempla* for ambassadors until the Roman Imperial Court. And, while it is also true that the *Presbeutikos* tends toward the melodramatic, Polybius' criticism of

⁸⁷ E.g. Kohl 4 (= Libanius, *Decl.* 3, 4 F; Odysseus and Menelaus); see Kennedy (1974), also Russell (1983) 110.

⁸⁸ E.g. Kohl 5 (= Aristides *Oration* 52 D); Kohl 4, 7 (= Libanius, *Decl.* 5, 3–5); see also note 35.

Timaeus shows (as do the fragments of the Hellenistic histories) that Hellenistic historians enjoyed these excesses.⁸⁹ Rather than favour the conclusion that the *Presbeutikos* is a unique rhetorical example, the evidence begins to suggest that the *Presbeutikos* resembles a *presbeutikos logos* from a history because that is what it is.

The Epibomios

The hypothesis might also explain the *Presbeutikos*' enigmatic companion in the pseudepigrapha, the *Epibomios* ('Speech from the Altar'). These two works form the earliest strata of the Hippocratic pseudepigrapha, despite sharing an awkward relationship to the rest of the corpus.⁹⁰ Although we get the picture in the *Epibomios* that the embassy of Thessalus has failed,⁹¹ the precise relationship between these speeches is also ambiguous. They *seem* to refer to common events; the *Epibomios* *appears* to be written for a reader who has also read and understood the *Presbeutikos*.⁹² Yet, although it seems clear that the two texts are to be read in relation to each other, the common historical context—crucial to understanding the speeches both by themselves and in respect to each other—has been left absent. If a later author wrote the *Epibomios*, it appears that he left the obtuse context without clarification (even by invention), making it difficult for readers to appreciate the pathos of his speech. If the same author wrote both works, it appears that he left the crucial information out of *both* speeches. Neither makes sense.

The *Epibomios*, however, makes good sense if an author wrote it in relation to a *Presbeutikos* that existed as part of a larger historical narrative. It makes the best sense, however, and for the most economical explanation, if both speeches came from the same historical work. Once reset in a historical frame, the disjunctive tensions

⁸⁹ Walbank (1972) 34–43.

⁹⁰ Erotian had already noted this awkward relationship c. 60 CE (Smith (1990) 6).

⁹¹ In the *Epib.* (p. 108.14–15 Smith = 9.404 L), a helpless Hippocrates beseeches the Thessalians for assistance against the Athenians, and claims that the Athenians, using their power badly, have put Cos 'in the position of a slave' (Ἀθηναῖοι . . . κακῶς ἐξουσίῃ χρεώμενοι, μητρόπολιν ἡμετέραν ἐν δούλῃς μέρει διατίθενται). This statement echoes the language of *Pres.* 9 (p. 122,1 Smith = 9.424 L: ἐν δούλων μέρει τιθήσεσθαι) and 10 (p. 122,30–32 Smith = 9.426 L: κακὸν ἐξουσίῃ, ὡ ἄνδρες Ἀθηναῖοι).

⁹² Edelstein (1939) 1298 argues that the *Epibomios* belongs to an earlier incident, but Smith (1990) 4–5 rightly notes that the text speaks otherwise.

of composition and relation, like the colours of a jigsaw puzzle piece, have explicit sense and mark the speeches as parts of a larger whole.

Conclusions Concerning Composition

A consideration of the form, content and setting of the *Presbeutikos*, therefore, leads toward the conclusion that it was once part of a historical work of the third century and that its author was familiar with the form and content of Coan ambassadorial speeches promoting the Asclepieion. While this conclusion is abductive, it is nevertheless strong, in that it provides both a synthetic solution for what appear to be multiple concurrent problems with the text and a concomitant explanation for the composition of the *Epibomios*. There remain, however, the obvious questions: is there any evidence for this hypothetical work of history and of this author? Accordingly, it is to these questions that I now turn.

THE PRESBEUTIKOS AND ‘TA KÔAKA’ OF MACAREUS

As unlikely as finding them might seem at first blush, there is a history and, I will argue, an author who fits this profile: the *History of Cos* (*Ta Kôaka*)⁹³ of Macareus, a Coan who wrote sometime during the reigns of Ptolemy Euergetes and Philopater (i.e. c. 246–204).⁹⁴ I will argue that what little we know about this work allows us to suppose that it included the *Presbeutikos* and *Epibomios*. More substantially, I use epigraphic and prosopographic evidence to argue that the historian Macareus also possessed the experience indicative of the author of the *Presbeutikos*. In the end, then, the conclusions concerning the origin of the *Presbeutikos* in a history, which were reached by an analysis of the text itself, are strengthened by the existence of a history by an author who is particularly fit to be the author of the speech.

⁹³ *FGrHist.* III B 456.

⁹⁴ Macareus’ name hearkens back to the mythological king of Rhodes and Cos (Diodorus Siculus 5.91; Laqueur (1928)); for the fact that he was Coan see Sherwin-White (1978) 13 n. 1; Fraser and Matthews (1987) 296.

The Work 'Ta Kôaka'

Macareus' work is unknown but for Athenaeus, who twice cites the third book of *Ta Kôaka* concerning Dorian sacrificial rituals to Hera on Cos.⁹⁵ While not much, this at least indicates that *ta Kôaka* contained esoteric information about Cos and its Doric traditions (which Athenaeus was unable to find elsewhere), something that also can be said of both the *Presbeutikos* and *Epibomios*. Topically, then, neither speech is beyond what we might expect to find in Macareus' work. In addition, neither speech is an unexpected stylistic element: Greek histories contain many speeches, and many of these are *presbeutikoi logoi*. In a third-century Coan history, speeches by members of Cos' most famous Asclepiad family seem a rather likely feature. In the end, however, we are left only with possibilities: a shared knowledge of obscure Dorian traditions may indicate a common author, and both the *Presbeutikos* and the *Epibomios* are the kind of speeches we might expect to find in a Coan history of the third century. But, although we cannot establish a stronger link between the texts, we can establish one between Macareus and the author of the *Presbeutikos*.

Macareus as a Historian and Author of the Presbeutikos: Three Individuals

As I noted above, the author's familiarity with the rhetoric of Coan ambassadors seeking *asulia* for the Asclepieion strongly suggests an affiliation between him and this historical endeavour. As for the historian Macareus, only three interconnected Coans of this name appear among the epigraphic records⁹⁶ in the third century and, remarkably, each fits this profile. The first Macareus was an important *theôros* who promoted the Asclepieion in Greece and Macedonia. The second Macareus was a patrilineal Asclepiad who served with the first man's son to promote and protect Coan interests under the aegis of Heracles and Asclepius. The third Macareus was a prominent Coan, whose father was a colleague of the first. If we consider that most ancient historians held important positions in their respective states and wrote texts reflecting their experiences and biases, the

⁹⁵ Sherwin-White (1978) 13–14.

⁹⁶ I base this number on an examination of Herzog (1899), Sherwin-White (1978), and Fraser and Matthews (1987).

place of the *Presbeutikos* in the *Kôaka* becomes a distinct possibility, no matter which one of these men might be the author. Let us, however, examine each candidate in turn.

*Macareus I*⁹⁷ *toû Aratou*

Macareus I, the son of Aratus, came from an extremely influential aristocratic family.⁹⁸ He appeared as a *theôros* in Sparta, Messene, Thelphusa, Elis, Aigeira, Megara, Phthiotic Thebes, Homolion (and an unknown city), Pella, Cassandrea, Amphipolis and Philippi sometime before 242. He best fits the period within which Macareus the historian composed, and the *asylieurkunden* decrees which mention him are from those cities in which historical arguments were crucial to the Coans' success. Considering his territorial responsibilities and experience, it is probable that he also spoke before the Delphic Amphictyony, the Thessalian *koinon*, in Maroneia, and in Ainos. One imagines that a historian of Coan affairs would be a great asset and a likely addition to these embassies. It may be no coincidence, therefore, that Macareus I was one of the most experienced Coan ambassadors. This experience also makes Macareus I the strongest candidate for the author of the *Presbeutikos*, since he also 'spoke at length', 'revealed', and 'renewed' the Coans' 'preexisting close ties of friendship' in these areas, using historical arguments similar to those in the *Presbeutikos*.

Macareus II, toû Philocleida

Macareus II, the son of Philocleides, served as *theôrodokos* (official host of *theôroi*) at Epidaurus around 225 and *prostatês* (presiding official) on Cos around 205.⁹⁹ In this latter capacity we find him, with

⁹⁷ I have added the numeration I–II–III for clarity.

⁹⁸ Macareus I's father, Aratus, was possibly *architheôros* to Delos before 279 (*IG* XI(2) 161B, 66; Sherwin-White (1978) 404; Patton and Hicks (1990) 322). His son Aratus was a contributor to a wartime *episodis* (voluntary contribution to the state) and served as one of the board of *prostatai* (presiding officers) who proposed a decree for building ships c. 205–201. About the same time he also proposed, together with Macareus II, the purchase of unfortified land for defensive purposes (Segre (1993) ED 49.5–6), and appears among the contributors to an emergency war chest along with Philip, the son of his father's colleague Aristolochus (in Patton and Hicks (1990) 10 C 81 and 90; also Sherwin-White (1978) 217, 404).

⁹⁹ *IG* IV² 414 (= Maiuri, *NS* 11).

Macareus I's son Aratus, urging an official purchase of unprotected land under the official insignia of Asclepius and Heracles.¹⁰⁰ As a representative to Epidaurus and a priest of Asclepius,¹⁰¹ he would have the interests in the Coan traditions and history included in the *Presbeutikos*. Moreover, Macareus II appeared at Delphi in the second half of the third century and seems to have utilised his privilege of *promanteia*, which identifies him as a patrilineal Asclepiad.¹⁰² If this Macareus was the historian, he also had a particular interest in the narrow group with which the *Presbeutikos* is concerned¹⁰³ and whose myth of origin for Delphic privileges the *Presbeutikos* contains.

Macareus III, toû Platonos

Macareus III, the son of Plato, was a victor at the Asclepieia around 208, became *monarchos* (a Coan magistrate) shortly thereafter, and was *architheōros* (chief *theōros*) to Delos in 190.¹⁰⁴ Although he seems relatively young to complete a historical work by the end of Philopater's reign in 204, his offices imply a relatively high degree of maturity and place him in the upper echelons of Coan social strata (amongst which we would expect to find our historian).¹⁰⁵ His direct connection to the historic *presbeutikoi logoi* through his father, Plato, a colleague of Macareus I,¹⁰⁶ also puts him in the profile for being the author of the *Presbeutikos*.

The rare use of the name Macareus in this period among the nobility,¹⁰⁷ supported by these men's common involvement in the official state cults, suggests that one of them was the historian. In addition, their connection (in the case of Macareus I and III) to the promotion of the Asclepieion, or (in the case of Macareus II) to the patrilineal Asclepiadai makes the historian the likely author of

¹⁰⁰ Segre (1993) ED 4.

¹⁰¹ Benedum (1978) 72 and n. 212.

¹⁰² SEG XVII 329. See the discussion of Benedum (1978), especially n. 239.

¹⁰³ The *Pres.* concentrates on patrilineal *Asclepiadai*, who also claim Heraclid descent. This group was so small that by the second century AD only one family, the Claudii Iuliani, could claim this illustrious heritage (Buraselis (2000) 82–84).

¹⁰⁴ See Sherwin-White's *Onomasticon* (1978), *sv* "Makareus"; Klee (1980) 7; Plassart *et al.*, *ID* 17; *ID* 421, 62 (190); Maiuri, *NS* 438, I.

¹⁰⁵ Sherwin-White (1978) 193–199.

¹⁰⁶ Herzog and Klaffenbach (1959) 29.

¹⁰⁷ Laqueur (1928), citing Herzog; Fraser and Matthew (1987) 296.

the *Presbeutikos*. Of the three, however, Macareus I is particularly—perhaps uniquely—qualified for being the author of these texts. Indeed, in seeking to corroborate the hypothesis that the speech is an excerpt of a historian's work, it is particularly significant that the person most likely to be the historian is also the most fit to be the author of the speech.

CONCLUSIONS AND IMPLICATIONS

Where, then, does this leave the *Presbeutikos*? It turns out that the argument for dating, the analysis of the rhetorical form and content, the evaluation of composition and the search for a suitable author—all converge on the conclusion that the *Presbeutikos*—and probably the *Epibomios*—are excerpts of the *Kôaka* of Macareus, probably the son of Aratus. If so, we have a firmer idea of the origin of the two fundamental pieces of the Hippocratic pseudepigrapha, a sizeable excerpt of a lost work of history and some hard information about a heretofore virtually unknown author.

Moreover, the intertwined involvement of all three possible authors and of their families with the Coan state cults leads one to wonder whether they were related by more than public service. Smith, who argues forcefully against the idea that the *koinon* of the Asclepiads was composed of physicians by profession, suggests that they were instrumental in caring for, and promoting, the Asclepieion.¹⁰⁸ Macareus I and Macareus III's father were directly involved in promoting the shrine, and Macareus II was a patrilineal Asclepiad and priest of Asclepius. Could all these men be Asclepiadai, and could Smith's suggestion be born out in this case?

If so, a tantalising possibility opens up on the role of the Asclepiads in the promotion of the Hippocratic—and consequently their own—myth. For, if the *Presbeutikos* provides a window on how the Coans promoted their shrine, the Coan Asclepiadai stood at the centre of this promotion both as characters and, it would appear, as ambassadors themselves. Perhaps this clan succeeded (beyond its wildest imagination) in finding a place in medical history when speeches excerpted from a Coan history, written by one of their own, arrived

¹⁰⁸ Smith (1990) 9–17. See Jouanna (1999) 10, 17–18 for an alternate perspective.

in Alexandria. The main excerpt, the *Presbeutikos*, showed Hippocrates as the member of a heroic line of patrilineal physicians. This combination of classical medical author, Greek patriot, and Asclepiad hero, when added to an anonymous body of medical works in search of a founder, proved to be a potent mixture in an age looking for foundations. When we add in the momentum of the Coans' *asulia* campaign, the popular exposure of Coan traditions (both through this promotion and other literature) and Coan influence in Alexandria, we have the picture of a third-century synergy that could catapult Hippocrates from a Platonic footnote¹⁰⁹ and Aristotelian reference¹¹⁰ to icon, and the Asclepiadai from cult priests to medical school, in short order.

And what of the historical Hippocrates? What facts we can glean from the chaff in the *Presbeutikos*' historical narrative remains an open question, but that there are some facts to glean seems a stronger possibility than before. Both its origin in a work of history and its features shared with historical speeches may bear on the relative reliability of the details of Hippocrates' life, family and work. We expect both historians and ambassadors to work from more than *mere* rhetorical fancy.

And what of the other Hippocrates? The Coans' promotion of the Asclepieion appears to be the 'Big Bang' of the traditional figure, and similarities between the *Presbeutikos* and the historical *presbeutikoi logoi* suggest, if nothing else, an insight into his emergence. Even if audiences had heard of Hippocrates, the vivid and engaged picture of the heroic Asclepiads was probably new, and this Hippocrates—already the best known of them—left an indelible mark on the popular imagination.¹¹¹ The half-century of relentless Coan exposure, from Egypt to Italy, helps to explain the sudden genesis of Hippocrates' broad recognition to the point that Varro refers to the plague episode as common knowledge in the first century.¹¹²

¹⁰⁹ *Protagoras* 311 b–c and *Phaedrus* 270 c.

¹¹⁰ *Politics* 1326 a 15–17.

¹¹¹ Jouanna (1999) asserts that Aristotle's reference to Hippocrates is 'proof of unchallenged celebrity' (7). Aristotle does not name-drop, and thus this passing remark does appear to indicate that Hippocrates had significant name recognition in medicine. This recognition, however, cannot explain the 'star power' of the traditional figure; it does help, however, to explain why Hippocrates would feature in the Coans' presentations. I am indebted to Susan K. Nelson, whose insight informs my thoughts here.

¹¹² Varro, *On Rural Farming* 1.4.5.

Moreover, just as one can find traces of the Coans' promotion of their shrine in the *Presbeutikos*, one can trace the effects of this promotion upon the Hippocrates of the Hippocratic tradition. Almost immediately, the Hippocratic legend began to grow into the disjointed corpus that bore his name. The authors of the ensuing pseudographic letters went on to expand, explain and harmonise the character of Macareus' Hippocrates with the corpus and with their own perspectives, and Hippocrates became an active Hellenic patriot, physician, philosopher and scientist. Later, Galen's efforts would carry the myth into the modern age, but the picture of Hippocrates—the man of action—remained at the heart of what was enthralling about his character. As one sees through the writers of the action-oriented *Bioi*, the enchantment of Hippocrates was not only in what he knew, but in what he did with what he knew—a practitioner's dilemma, as engaging today as it was to the audiences who first heard the tale.

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PART THREE

‘HIPPOCRATIC’ AND ‘NON-HIPPOCRATIC’ MEDICINE

AIR, PNEUMA AND BREATHING FROM HOMER TO HIPPOCRATES

Anthoine Thivel

Summary

This paper places Hippocratic views on respiration in the context of theories of respiration from Homer to the late fourth century BC. It distinguishes three stages in the development of thinking about respiration: an archaic period, an Empedoclean period, and an Aristotelian period. All three stages are represented in the Hippocratic Corpus.

There is a question which has rarely been raised in our studies concerning the conceptions of the ancients in medicine and biology: it concerns the manner in which the Greeks imagined the process of respiration in man and in other animals, if they had any idea of that at all. In fact, their ideas were different at different periods of time, and the greatest difficulty we have in understanding these ideas is that we constantly and sub-consciously transpose our own ideas into antiquity, as we ingenuously believe that the ancients thought as we now think. But, if common opinion and scientific theories had not changed for 2,500 or 3,000 years, the study of antiquity would have no interest!

As for breathing and respiration from Homer to Hippocrates, I think we can divide this long space of time into three periods:

- 1 the archaic period, with Homer and other poets, as well as certain treatises in the Hippocratic Collection;
- 2 the 'Empedoclean' period, which goes as far as Plato and has numerous representatives in the Hippocratic Corpus; and then
- 3 the 'Aristotelian' period, which includes Diogenes of Apollonia, Philistion, Anaxagoras, Democritus, Diocles of Carystus and others, and which has no representatives in Hippocrates, except perhaps an echo in the treatise *On Nutriment* and in one or two passages in *On the Nature of Bones*.

In the first period, air is a material, visible substance, and, if it penetrates into the body, it causes pain and disease; in the second period, air and blood are the source of life and circulate alternately in the whole body through the vessels and the pores of the skin; in the third period the lungs are known as the organs of respiration, which always breathe in and out, but air is no longer useful to breath, it is just a cold flow whose only function is to cool the heat of the heart. So two more questions are added to the problem of respiration: is air warm or cold? Is it a form of nutriment or not?

Thus the ancient conceptions gradually drew nearer to the true explanation of our modern science, nevertheless without completely understanding the efficiency of breathing and the real role of the lungs; but the boundaries between these periods are not sharply delimited, there are influences, combinations, confusions, and we have to try and disentangle all this hank, to arrange this puzzle.

In the archaic period, men thought that all objects had to be visible, tangible, in order to be real. The invisible had no reality. Indeed, there were the gods and goddesses, who belonged to the supernatural universe, but they too were visible, and, when they came down from Olympus to intervene in human affairs, they had to be hidden in little clouds or disguised in various human figures. This is what Homer means by "air" (ἀήρ, or ἡήρ); such are the clouds, fogs and mists that drag over the earth and sometimes gather in the sky, but air is never an invisible flow that would go in and out of the human body and all living things. So incredible, so unlikely as it may seem, one had not yet established the relationship between the upward and downward movements of the chest and the necessity of air to maintain life. No doubt, one knew the first cry of the baby who comes out of its mother's womb, and the last sigh, the last breath of the dying man, but those events were classed in the general category of life itself, and they were not compared, for example, to the inflating of bellows, a very common experience that seems to us the evident proof of the invisibility of air; but in this case 'air' was not *aër*, it was *phusa*, and the etymology of this word shows that it especially referred to a kind of air which is pushed with strength, as in the Latin *pustula*, particularly in the case of the bellows used to keep a fire burning. Later on, all these comparisons will be used in order to explain respiration, but in Homeric times such reasonings were impossible, since air had to be necessarily visible.

Under these conditions, how can we explain the frequent use of the verb ἀναπνέω in Homer? Why could this verb not mean “to breathe in”, “to inhale air” into the lungs? Contrary to the appearances, and in spite of the prefix *ana-*, this is absolutely not the meaning of this verb in Homer; there are plenty of examples which show that the verb is almost a synonym of “to pause”, “to stop”, “to have respite”, and it is closely connected to the ideas of “effort”, “strength”, “life”, as we have just seen for the new-born and for the dying. In this case, the prefix *ana-* does not indicate a movement, but a moment: it is strictly temporal. To this category belong the examples of ἀναπνέω-ἀνάπνευσις at *Iliad* XI 382, XI 800, XV 235, XVI 301, XXII 202 etc., where the English translators write: “So would the Trojans have had a respite (ἀνέπνευσαν) for their woe”, “that yet again the Achaeans may have respite (ἀναπνεύσωσι) from their toil”; or at *Iliad* XVII 761: πολέμου δ’ οὐ γίγνεται ἔρωή, “but there was no ceasing from war”. Thus ἀνάπνευσις, παύσις and ἔρωή are perfect synonyms. We find the same meaning in Hesiod’s *Theogony* (line 797): κεῖται ἀνάπνευστος καὶ ἄναυδος (“lying without breath or speech”), where the verbal adjective ἀνάπνευστος¹ indicates the lot of the gods who forswore themselves, after they had sworn by the Styx: they are deprived of life for a year. The word is also used in this way in Pindar’s *Olympian* 8.7, μόχθων ἀμπνοά, “rest from toils”, and *Pythian* 4.199, ἀμπνοὺν ἔστασαν, “they recovered breath”, “they took fresh courage”, etc. And such phrases are in current use in Sophocles, Aristophanes or Plato.

Concerning the materiality of air there are plenty of examples in the Hippocratic Collection, and naturally in the most archaic treatises, the so-called ‘Cnidian’ ones. To begin with, in *On Diseases II* several passages could prompt us to think that the author knew of lung respiration, but when examining the text more closely we discover that this is not true: indeed, in chapter 33 (polyp in the nostril), the sick person expels air (ἐπὴν ὥσῃ τὴν πνοὴν) and inhales it (ἐπὴν ἀναπνέουσι, 7.50 L.), but in chapter 61 (dropsy in the lung) we see clearly that slow or fast breathing is simply one symptom among

¹ The difficulty about this text is well known: in referring to *Odyssey* 5.456–457, ὁ δ’ ἄρ’ ἄπνευστος καὶ ἄναυδος / κεῖται, one must either suppose that ἀνάπνευστος had a negative meaning in Hesiod or restore ἄπνευστος and insert particles such as ἄρ’ (Hartung), or ἄμ’ (Hermann), *vel sim.*

others; it has a place in the general clinical picture but does not imply a particular theory about respiration: there is high fever, cough, inflated feet, retracted nails and fast breathing (ἀναπνεῖ ἄθροόν, 7.94 L.). All these symptoms are well known: they are the symptoms of an empyema, an abscess in the lung, and they are exactly the same in *Prognostic* 17 (2.154 L.), *Coan Prenotions* 396 (5.674 L.), *On Places in Man* 14 (οἱ ὄνυχες ἔλκονται, γρυποῦνται, 6.298 L.). In the same way, in *On Diseases II* 71 (on leucophlegmasia) the whole body is said to be swollen by a white oedema, the belly is thick and tight, the feet and the thighs swell up, the face is red, the mouth dry, and the breathing is fast (ἄθροόν) or panting (πυκινόν, 7.108 L.). All these signs are on the same level, nothing indicates that the lung is particularly concerned. The same comment can be made when the author speaks of orthopnoea: the sick man can only breathe when he is sitting; this is a correct observation, but the lung is not the point. And we know why such is the case: it is because, for these physicians and for everybody at that time, the function of the lungs was to let the liquids pass, naturally because of a very simple analogy: the lung is like a sponge—it is a spongy organ. All writers say so, not only the poets, such as Alcaeus who invites us (in Plutarch's *Symposium*, 7.1) “to moisten our lungs with wine”, but the physicians in the same way, after a doctrine which will still last several centuries.

As the lung received the liquids, it could not at the same time receive air, which might have opposed the liquids passing through. It is usually thought that the etymology of πλεύμων (the ancient name of the lung) is related to an Indo-European root *plew-, “to float”, which also produced the Greek πλέω, because the lung was seen as an organ which floats on water; but many other organs can float on water, and I think—if this etymology is right at all—that it is due rather to the view that the lung is an organ with many holes which can contain liquids, precisely like a sponge.

But the most striking passages in *On Diseases II* are chapters 17 (7.30 L.) and 59 (7.92 L.). In the first, a very severe disease is being described: the vessels around the brain have too much blood, they become hot, the ears are humming and filled with air (πνεύματος ἐμπύπλονται), which is very dangerous, because the patient dies in six days unless one can expel water through his ears and nostrils. And in the second passage the presence of air in the body is still more dangerous, for, when the lung “falls against the side”—that is to say, is too dry and therefore adheres to the inner coat of the

chest—the sick is struck with cough and orthopnoea, “a grating sound like leather” can be heard in his lung, “he seems to be breathing through the chest” (διαπνεῖν δοκεῖ διὰ τοῦ στήθεος), and this is the most dangerous symptom: the physician must at all costs drive the air out of the lungs, using a bladder and a nozzle.

Such errors have something extraordinary for us: we wonder how men could think that the presence of air in the lungs was the cause of a fatal disease. But we find these strange ideas also in a treatise which is regarded as one of the best of the Hippocratic Collection—the most prominent statement of medical method at that age, and perhaps up to the present time—I mean *On Ancient Medicine*: in chapter 22, the author explains that, if a small quantity of air penetrates into the body, it can form air-pockets which blow against certain organs, in particular the lungs, the spleen and the breast, and harden when they are full of water, and this induces pains and suppurations (1.626 L.). So this physician, in spite of his great knowledge of nourishment and his rigour of reasoning, still refers to ancient conceptions which were largely abandoned in his time. As a matter of fact, he is an adversary of Empedocles, and to a certain extent we can call him a ‘Pre-Empedoclean’. Yet, even if those doctors still believed that the material air had to be visible, they could not fail to realise that there is a constant inward and outward movement of something through the mouth and the nostrils, and that, when this movement is stopped, the patient is choking (πνίγμα, πνιγμός, *On Diseases II* 70, 7.108 L.), he is nearing his death. This was the breath of life, the pneuma, but how far did this pneuma go down into the body? Certainly not lower down than the throat, since the lungs were full of water or other liquids, and air in the throat was enough to explain voice.

Round about the middle of the fifth century BCE, two important discoveries were made, perhaps in Sicily or in southern Italy: the invisibility of air, and the position of the heart in the centre of the blood vessels. Naturally, we do not know the names of the inventors who revolutionised biology to such a degree, and our knowledge of these developments is almost solely based upon the celebrated passage in Empedocles’ poem (DK 31 B 100, lines 6 ff.) where the poet describes the bubbles going up from the holes of the clepsydra through the water: they were the evident proof that the air in the receptacle had been expelled by the water coming in; thus the invisible had become visible, the materiality of the invisible air had been

proved, it was not only a flow of mysterious life, something could be invisible and yet material; it was a revolution in thinking, and it was destined to have considerable consequences. As there was no microscope in those times, one could imagine thousands of other things that were real, but not visible, and this kind of hypothesis was able to cause innumerable errors in the future. To begin with, Empedocles (or one of his fellow-men) imagined that on the whole surface of our skin millions of little, invisible holes, the pores, had been drilled, which communicated with the whole body through the blood vessels, so that the external air penetrated into the body through these holes and mixed with the blood and humours in the vessels. So the two discoveries were linked: the vessel system had a centre, the heart; blood became essential for life and air equally: life was a mixture of air and blood. These ideas were not completely false, they had good prospects before them; but how and in what organ did the mixing happen? Empedocles did not answer these questions, he only supposed that the breathing in and out was caused by the alternation of air and blood in the body, at one time the first, at another time the second occupying the totality of the vessels. External and internal air were like communicating vessels. But we must acknowledge that the second part of the Empedocles passage does not appear as convincing to us: for a second time (DK 31 B 100, line 22), he shows the air penetrating into the clepsydra and expelling the water: this is evidently impossible, the experience here is falsified by a prejudice that is the result of a biological theory. And anyhow the fact remains that the lungs were not yet conceived of as the organs of respiration, since the process of breathing took place in the whole body.

So we can state without doubt that, with the exception of the works already cited, which refer to archaic conceptions, and one or two others which are perhaps informed by the new theory about lung respiration, all Hippocratic treatises, whatever trend of opinion they may represent, endorse the Empedoclean theory of respiration through the whole body; and this is easily proved.

Now the verbs ἀναπνέω and ἐκπνέω are common in these treatises, and they have the meaning “to inspire” and “to expire”, but these operations are made by the whole body, not only by the lungs. At first sight, we must note that these verbs, ἀναπνέω and ἐκπνέω, are absent from *On Ancient Medicine*, *Airs, Waters, Places*, and *Epidemics I* and *III*. Does this mean that in these treatises the Homeric the-

ory of the visible air is still valid? Certainly not, for we can see clearly that, for these authors, the quality of air is very important for health, although they have not yet assimilated the Empedoclean theory, and we must assign to them a rather late date in the fifth century BC, perhaps 430 or 420.

In fact, ἀναπνέω and ἀναπνοή are more widely used than ἐκπνέω (only present in five treatises); and ἐσπνέω, ἐσπνοή and ἔσπνοος also occur, but they are very rare (five, two and one occurrences respectively). Later on, ἀναπνέω and ἀναπνοή acquired the general meaning “to breathe”, “breathing”, and this is the title of the Aristotelian treatise. The verbs ἀναπνέω and ἐκπνέω are for the first time set in opposition in the passage from Empedocles (DK 31 B 100, lines 1, 8 and 25), and later on they will be again opposed in Aristotle’s *History of the Animals* 487 a 28 and in his treatise *On Respiration* 473 a 15; but this is in an entirely different context, as Aristotle knew that air is received by the lungs.

Throughout the Hippocratic Collection, regardless of the question of different medical schools, we find the theory of respiration through the whole body. It is evident in the series *On Generation*, *On the Nature of the Child*, *On Diseases IV*; and here the pneuma is a warm breath, the origin of life. The situation is the same in the three books of *On Diseases of Women*. When we remember that in *On Airs, Waters, Places* the winds were called *pneumata* and could be of different qualities—warm or cold, dry or wet—we understand that a warm pneuma that causes life is a new idea, and that scientists have passed on from the physical concept to the biological or psychological one and not the other way round. In this manner, I think, must one interpret the statement of the itinerant poet and philosopher Xenophanes of Colophon: ψυχή πνεῦμα, “the soul is breath” (DK 21A1). It means, in my opinion, that the soul is not a supernatural thing, separated from the body, but it is a material breath, like the external winds, which circulates in the body and sets it in motion.

From this perspective, the fact that the lung is spongy and lets the liquids pass is no longer an obstacle, for air and water can mix together. So we read in the treatise *On Breaths*, chapter 4: “Air (ἄήρ) is mighty in the universe and it is indispensable for the living beings, for they can dispense with food several days but they cannot dispense with breathing for a single moment. The fishes themselves breathe in the sea, because air mingles with water” (6.94 L.); and a little further: “Men have pauses in their activities . . . but this is

the only activity that never ceases in mortals, who at one time blow air and at another time inspire it" (τότε μὲν ἐμπνέοντα, τότε δὲ ἀναπνέοντα). In this passage ἐμπνέω does not mean "to inspire" but "to blow on something", "to insufflate"; and this sentence is no proof that the author knew the mechanism of respiration, because evidently for him breathing is made by the whole body. Diogenes of Apollonia expresses exactly the same opinion.²

Here we encounter authors who think the breath (*pneuma*) is cold and yet sets in motion the blood and the other humours. This is also the conception of the author of *On Regimen*, for example at 2.38 (6.530–532 L.): "As there is breath in living things, it is also present in all the remainders", and here the effect of breath is always to cool down and moisten everything. This conception of a cold *pneuma* is probably nearer to the natural realities, and older than the belief in a warm *pneuma*.

In the treatise *On the Sacred Disease*, it is beyond doubt that air passes through the whole body and not simply through the lungs, although air begins by going up to the brain—which makes sense in a book dealing with epilepsy and explaining it as the result of a flow of phlegm that prevents air from circulating in the brain. But air does not remain in the brain, it goes down to the lungs and spreads further in all organs and limbs, as the symptoms of epilepsy are a general disorder of all bodily movements and functions. And these considerations will perhaps allow us to make up our mind on a problem of text: "When air", says the author in chapter 7, "cannot enter in sufficient quantity into the body . . ." or "into the mouth . . ." (6.374 L.), MS Θ reads σῶμα, while MS M reads στόμα. Amneris Roselli translates "il corpo"; Littré, "bouche"; Jones, "mouth"; Grensemann, "Mund". If my explanations are correct, I think σῶμα, "the body", is the genuine reading, and this is one more indication that *On the Sacred Disease* is not by the same author as *Airs, Waters, Places*—even more so as they do not conceive in the same manner of the relationships between gods and men.

Respiration through the whole body is also the general doctrine of the great treatises ascribed to the so-called Coan school. Let us

² "Moreover, here are important proofs of this fact: men and the other breathing animals owe their lives to air; this is for them soul and thought, as will be clearly demonstrated in this work, and if it fails them, they die and their thought is lacking" (DK 64 B 4, 60–61).

examine it in *Prognostic*. The author says in chapter 5 (2.122 L.): “A fast and painful breathing (πνεῦμα) indicates a suffering above the diaphragm, a deep and slow breathing (ἀναπνεόμενος) shows delirium (παράφροσύνην), a cold breathing out (ἐκπνεόμενον) is a very serious sign of death, but one must think that a good breathing (εὐπνοίαν) has a very effective power to restore health in acute diseases . . .” In this text, ἀναπνέω and ἐκπνέω are contrasted, but they represent only empirical notations: the movements of air in and out are solely mentioned if they are warm or cold, respiration seems to be a general condition of the body, and there is no mention of the lungs. In the same manner, we read in chapter 15 (2.148 L.): “Evacuate as fast as possible the sputa that take form in the lung, for, if the breathing is deep and tight (πνεῦμα μέγα καὶ πυκνόν), the pain does not cease, heavy thirst, high fever, the belly and the sides are warm, the forehead and hands are cold, the sick dies before the fourteenth, the ninth or the eleventh day.” Here, although the lung is mentioned and related to breathing, these phenomena are once more considered to be simple symptoms, comparable with thirst and fever, announcing a fatal issue, but the lung does not yet feature as the organ of respiration.

One can make the same remarks on numerous passages of *Epidemics II*, *IV*, *VI* and *V*, *VII*, or of *On Regimen in Acute Diseases* and its *Appendix*: various sorts of breathing are noted and the good and bad signs are specified, but everywhere the vessels carry at the same time air and blood, and sometimes also the good and bad humours, and the breathing takes place in the whole body, not especially in the lungs.³

I would like to comment on one passage in particular, *Epidemics II* 6.1 (5.266 L.). It reads:

Σάρκες ὅλκοι καὶ ἐκ κοιλίης καὶ ἔξωθεν· δῆλον ἡ αἴσθησις ὡς ἐκπνοοὺν καὶ εἴσπνοον.

The flesh attracts from the belly and from outside; evident is the sensation that they breathe out and in.

This text has been improved by Daniela Manetti and Amneris Roselli, but Littré and Ermerins, faithful to the text of the vulgate, added: ὅλον τὸ σῶμα. Lately, Wesley D. Smith has introduced an emendation.

³ See for example *Epidemics II* 7 (5.76–78 L.), *On Regimen in Acute Diseases—Appendix* 7 (2.406 L.), *On the Art* 12.4 (6.24 L.) and many other passages.

He writes: δῆλον αἴσθησις ἐν πόνῳ καὶ ἔκπνοον, following MS M, which has ἐν πόνῳ and translates: “Obvious in exercise is the perception that there is exhalation also.” I think the addition of ὅλον τὸ σῶμα is not necessary; the opposition between ἔκπνοον and εἴσπνοον is evident and must not disturb our understanding, as the text explicitly says that the whole body, the flesh and the belly, breathes out and in. This treatise, *Epidemics VI*, is still under the influence of Empedoclean thought.

Unfortunately I have no room to speak of the theory of breathing in Plato’s *Timaeus*. It was rightly criticised by Aristotle, but I find in both philosophers the same disadvantage, which was cause for several errors: both believed that void does not exist, and we come, again, upon the same prejudice in philosophers like Anaxagoras and Democritus. Plato shared the same conviction as the Hippocratic writers: for him, breathing in and out was produced by the whole body, and not especially by the lungs. His main concern was not the proper mechanism of respiration, but rather the means of avoiding to postulate an empty space in the exchange between external and internal air.

In the middle of the fourth century a new and great discovery was made, the inventors of which are, once again, not known: resuming an ancient comparison between the lungs and bellows, certain physicians understood that the upward and downward movements of the chest were caused by inspiration and expiration, and this knowledge is, undeniably, the chief merit of Aristotle’s little book *On Respiration* (*De respiratione*, Περὶ ἀναπνοῆς). Here begins the third period which I have distinguished, when the function of the lungs was finally acknowledged, but was—unfortunately—badly interpreted. Examples of this explanation are very rare in the Hippocratic Collection, only two or three, and not very clear. First, there is the treatise *On Nutriment*, from which we can take three significant paragraphs: in section 28 (9.108 L.) we read: “Porosity of the body concerning respiration (διαπνοή), for those from whom more is removed, a beneficial thing; density of the body concerning respiration (διαπνοή), for those from whom less is removed, a harmful thing.” I translate διαπνοή as “respiration” and not “perspiration”, as does Robert Joly in his edition (CUF 1972, p. 144), probably alluding to the respiration by the pores of the skin, after the ‘Empedoclean’ idea—an opinion which in fact lasted a very long time; here διαπνοή may in fact be translated by “respiration” because, in the text, it says “when the

body is too loose, it needs to be constricted, and, when it is too tight, it needs to be loosened". Further on, in section 29 (9.108 L.), we read: "The lung attracts a nutriment that is opposed to the food of the body": this nutriment is evidently air, which the author considers to be such, whereas the body lives on solid and liquid food. And then section 48 (9.116 L.): "Throbbing of the vessels and breathing of the lung (ἀναπνοὴ πλεύμονος), for air is also a nutriment." So this author, who uses an archaic style and imitates Heraclitus, knows the recent theories and combines them with the ideas of the Hippocratic writers. He even writes πλεύμων, with λ, when by his time the word was rectified to πνεύμων, since the relation between the lungs and the respiration was established.

On the Nature of Bones is a rather ill-assorted compilation, some parts of which are of really no good quality, but we read in section 13 (9.184 L.) this interesting sentence: "The lung receives a little quantity of blood, but much of breath, and it is spongy (σπογγοειδής)". So the ancient comparison of the lung with a sponge is no longer an obstacle which could prevent the physicians from understanding that the lung is full of air. No doubt, these fragments must be dated later than the other works of the Hippocratic Collection, at the end of the fourth century BCE, or still later.

We have just seen that in *On Nutriment* air is considered as nutriment: τροφή γὰρ καὶ πνεῦμα. This is a very good theory, but it was unfortunately abandoned by the upholders of the breathing function of the lung. Such is Aristotle's opinion in his booklet *On Respiration*. By a sort of fatality we observe, at almost all the periods of the history of the sciences, and even nowadays, that each good discovery comes, as it were, at the price of a regression in the same sphere of research. Thus the treatise *On the Heart*, probably in the third century BC, affirms: "Air and water are not food." (3, 9.82 L.). I dare say this bad trend comes perhaps from the wish to renew everything, to shake up tradition, to contradict one's predecessors, but it is also the general tendency of the human mind to extend to all phenomena the true explanation one has found for one. On the whole, it is perhaps an effect of natural laziness. However, if I may give expression to a wish, I should hope that this little essay on the history of respiration in ancient Greece will be useful to assign a sure date to some works of the Hippocratic Collection, and perhaps to other literary texts.

MICROCOSM AND MACROCOSM:
THE DUAL DIRECTION OF ANALOGY IN HIPPOCRATIC
THOUGHT AND THE METEOROLOGICAL TRADITION

Frédéric Le Blay

Summary

This paper opens a new perspective on the question of the analogy between the body and its environment as it is raised in some of the Hippocratic writings. Studying the structure of analogy in the meteorological treatises, it proposes a reversal of the traditional microcosm/macrocosm representation of the world and shows that medical theories—both Hippocratic and non-Hippocratic—became models for a makranthropic approach to nature. This focus on the direction taken by analogical thought allows us to confirm the unique character of the treatise on On Sevens (De hebdomadibus) within the Hippocratic writings.

In order to investigate into the secrets of nature, the Greek philosophers of the sixth century BCE relied on the basic principle that Democritus is thought to have formulated first: “man is a small universe” (ἄνθρωπος μικρὸς κόσμος).¹ Man was conceived from the same elements as the rest of the universe and obeys the same natural laws; he is a reduced version of the *cosmos*. Borrowing this representation from the philosophers, the first medical theoreticians were able to develop a physiological and pathological system based on elements, humours and primordial qualities.² Thus, macrocosm stands as a model for the physician to explain what lies beyond common experience, whether he admits the very identity and analogy of nature

¹ DK 68 B 34.

² Hippocratic writers are often presented as the borrowers of Presocratic theories; such an assumption seems to draw a link of filiation between philosophical and medical thought, establishing the primacy of philosophy over other forms of thinking. One should rather consider that the relationship between physicians and philosophers was one of competition and emulation and not of dependence. On this aspect, see Jouanna (1992) and Longrigg (1993).

between microcosm and macrocosm or only connections and functional analogies. Several treatises of the Hippocratic tradition are examples of this approach.³

Some of the Hippocratic texts have been described as “philosophical”: man, in his intimate structure, is described as an imitation of *cosmos*. According to their authors, the nature of man can be investigated only if one has previous knowledge of the whole; they assume that microcosm and macrocosm are identical in their composition and operation.⁴ Three treatises are representative of this “philosophical” medicine, *Regimen (De diaeta/De uictu)*,⁵ *Sevens (De hebdomadibus/De septimanis)*⁶ and *Fleshes (De carnibus)*.⁷ The first one⁸ states that medicine cannot be an autonomous science but directly depends on philosophical knowledge and cosmological theories, its main argument being: our body is an imitation (*apomimesis*) of the universe. In this search for correspondances, *Fleshes*⁹ gives first a brief description of the creation of the universe before turning to the formation of man from the very same elements. But such texts only represent a tendency in Hippocratic writings, since it has been shown that other sources are resolutely opposed, in a polemical way, to such a theoretical approach; the author of *Ancient Medicine (De prisca medicina)*¹⁰ argues for the autonomy of medicine as an art and a science, dismissing physicians who, like Empedocles or other philosophers, always go back to the origins and the elements to understand man.¹¹ As C.

³ Among many valuable contributions to this topic, Magdelaine (1997).

⁴ Magdelaine’s article (see above) is very relevant by stressing the point that those medical texts are of great interest to us in our knowledge of ancient philosophy, since they are testimonies of detailed and extensive parts of the first cosmological theories upon which the philosophical tradition has only saved fragments—often obscure—or late doxographies—that one cannot always trust.

⁵ 6.462–663 L.; ed. Joly & Byl, *CMG*, I, 2, 4, Berlin, 1984; see also Joly (1960).

⁶ 8.616–673 and 9.430–466 L. The origin and dating of this text, mainly transmitted to us through a late Latin translation, are very controversial. For the debate on this text and its interpretation, see West (1971) and Mansfeld (1971), who dates this work in the first century CE.

⁷ 8.576–583 L.; ed. Joly, Collection des Universités de France, XIII, Paris, 1978.

⁸ This list of three is by no means exhaustive. One may add, with West (1971), *Nutritment (De alimento, 9.94–123 L.)* and *Breaths (De flatibus, 6.88–117 L.)*.

⁹ It is generally stated that this text was written during the fifth century BCE; it is then contemporary with *Regimen*, even though they differ considerably in their theories.

¹⁰ 1.570–637 L.; ed. Jouanna, CUF, II/1, Paris, 1990.

¹¹ Ch. 20, 1.620–622 L. and Jouanna, CUF, II/1, Paris, 1990, 145–146.

Magdelaine states,¹² it is this particular aspect, the reaction of medicine against philosophy, that posterity has retained as one of the main contributions of the Hippocratic writers, even though it only concerns a part of them.¹³

Another approach consists of understanding the interaction between our body and its environment. Analogy is therefore defined in terms of connection rather than identity. What is at stake here is what one might call environmental or meteorological medicine.¹⁴ *Nature of man* (*De natura hominis*)¹⁵ develops the association between humours and seasons; its quaternary sketch is of course a strong indication of the theoretical ground of the whole. Still, the idea that climatic changes affect human physiology, and in a more general way, the sanitary state of populations is a concern of mere empirical observations. *Aphorisms*¹⁶ and its catalogue of diseases listed by season are a matter of pure medical knowledge and experience. The emphasis on climate as a determinant factor for the understanding of pathological states and the choice of appropriate therapeutics places the practice of medicine within the field of meteorology. But one should not reduce the scope of ancient meteorology to seasons and climatic phenomena, as *Airs, Waters, Places* (*De aere, aquis, locis*)¹⁷ reminds us, since its programmatic title clearly indicates that our environment is a combination of various elements which interfere with each other to produce certain damage or benefits on populations and individuals. And one should not be misled by the famous sentence with which the author ends his introduction:

If it be thought that all this belongs to meteorology (μετεωρολόγα), he will find out, if he does not change his mind, that the contribution of astronomy (ἀστρονομία) to medicine is not a very small one but a very great one indeed. For with the seasons (τῆσιν ὥρησι) men's internal organs (αἱ κοιλίαι) suffer change.¹⁸

¹² *Op. cit.* p. 32.

¹³ To *De prisca medicina*, Magdelaine (1997) associates *De natura hominis*, as a reaction against the philosophical tendency in medicine. But West (1971) presents the latter treatise as approaching the study of human physiology from the angle of cosmology.

¹⁴ For a first definition of this aspect, see Brunn (1946–47).

¹⁵ 6.29–69 L.; ed. Jouanna, *CMG*, I, 1, 3, Berlin, 1975.

¹⁶ 4.396–609 L.

¹⁷ 2.12–93 L.; ed. Jouanna, *CUF*, II/2, Paris, 1996.

¹⁸ 2.3 (2.16 L.; Jouanna 189). Trans. by W.H.S. Jones, *The Loeb Classical Library*, vol. I, 1933, with corrections in accordance with Jouanna's reading.

What is implied here by the word *meteôrologia* is not only climate, seasons and atmospheric phenomena but the whole range of phenomena which constitute ancient meteorological science, including hydrology, which the Hippocratic writer takes into serious consideration.¹⁹ In such a vast ensemble, astronomy²⁰ is only one element, maybe the most evident as the physician seems to indicate—the fact that with the change of seasons, related to the moving of the stars, our body passes through various states, belongs to the realm of common experience and is enough to convince even the most reluctant reader. Therefore this is a whole body of knowledge, a whole scientific field, whose tradition goes back to the first *phusiologoi*, that physicians have at their disposal in order to investigate into human anatomy and physiology, using analogy as a criterion. For when dealing with rain water and the effects of its consumption on health, the author of *Airs, Waters, Places* begins by giving a summary of the formation of clouds and the causes of rain,²¹ in the form of a brief meteorological account comparable to that which Aristotle and his followers have transmitted to us.²²

ANALOGY: A FUNCTIONAL DEFINITION

These preliminary remarks about the microcosm/macrocosm dichotomy in Hippocratic writings address the question of analogy, a central aspect of scientific thought, especially when one turns to the first attempts to represent and conceptualize new and unobservable objects or phenomena. Even if this point has been studied quite extensively as regards Hippocratic thought, it seems that the question of the use of analogy as a heuristic tool in Hippocratic writings in comparison to other scientific traditions has yet to be discussed. When medical writers feel free to exploit the fields of cosmology and meteorology

¹⁹ For a summary of the various aspects of the meteorological tradition, see Capelle (1913) and Gilbert (1907). In this context, Jouanna's translation of the expression, "les choses d'en haut", seems too restrictive.

²⁰ The mention of which is referred to by Jouanna (p. 26) as the first instance in Greek literature with Aristophanes' *Clouds* (l. 201). See also Phillips (1983).

²¹ 8.6–7 (2.36 L.; Jouanna 205–206).

²² In his commentary on the treatise, known to us through an arabic version, Galen (trans. Strohmaier to be published in the *CMG*, II, 4, 8) compares this passage to a similar one in Aristotle's *Meteorologica*, I.9, 346b 24–31.

to expand their own field of investigation, one must ask whether cosmological and meteorological writers also use analogy with biology or physiology to establish the foundations of their own science.

Ch. Perelman²³ gives the following definition of the analogical relationship: A is to B as C is to D, couple A–B being the *thème* in the analogy and couple C–D being the *phore*. The *thème* is the couple on which there is to be a discussion, it is the topic which is dealt with; the *phore* is the couple one rests on to transfer properties and structural patterns. Applying these definitions to Hippocratic writings, one may say that, in their argumentative structure, the body is the *thème* and the universe the *phore*. Taking as an example *Regimen 1* and its account of the formation of the embryo (ch. 10),²⁴ the analogy can be summarised as follows:

<i>Thème</i>	cosmology	<i>Phore</i>	anatomy
A	the sea (<i>thalassa</i>)	C	the belly or stomach (<i>koiilê</i>)
A	the land (<i>gê</i>)	C	concretion of water around the stomach (<i>hudatos psuchrou kai hugrou sustasis</i>)
A	...	C	...
B	the universe (<i>ton holon</i>)	D	the body (<i>to sôma</i>)

From the knowledge one has of the *phore*, it is possible to determine the properties (A) of B. Thus the analogy is initially set between B, the unknown element in the relationship, and D, an element which is supposedly part of our experience and therefore relatively well known.²⁵

P.H. Schrijvers has devoted a very thorough article to the question of analogy in Epicurean thought,²⁶ taking the text of Lucretius as testimony. Even though the figure itself was widely used in scientific and philosophical texts before Epicurus, the philosophers of the

²³ Perelman (1969).

²⁴ 6.484–486 L.; Joly, 11–12.

²⁵ Black (1962) insists on the fact that the model must belong to a more 'familiar' realm than the system to which it is applied.

²⁶ Schrijvers (1978).

Garden have often been described as the ‘inventors’ of the analogical method, since they make systematic use of this figure both as a heuristic tool and a proof in their investigations. Through the reading of Philodemus’ treatise, *On Methods of Inference (De signis)*²⁷ in particular, one may say that they also attempted to think about their methods and the conditions of scientific thought, and even if they are not the founders, they might very well be the first systematic theoreticians of epistemology. Nevertheless Schrijvers is correct when observing that, with his frequent use of analogy and visible symptoms to elucidate the hidden mechanisms of nature, Lucretius sets his approach in the tradition of ancient philosophers whose epistemological maxim was first formulated by Anaxagoras: *opsis adêlôn ta phainomena*.²⁸ Turning to the microcosm/macrocosm parallel as a frequently used figure, he points out the need for a formal distinction: if man constitutes the starting point of the analogy, so that knowledge associated with its anatomy and physiology is transferred to the universe, one should rather talk about the representation of the world as a *makranthropos*. With regard to Lucretius’ *On the Nature of Things (De natura rerum)*, Schrijvers observes that the representation of man as microcosm *stricto sensu* occurs only once, with the description of an epileptic fit.²⁹ As for the *makranthropic* analogy, he states that it occurs only in the Hellenistic and Roman periods, relating this fact to the influence of Posidonius of Apameia.

BIOLOGY AND PHYSIOLOGY AS MODELS TO UNDERSTAND THE WORLD: ARISTOTLE’S *METEOROLOGICA*

For some time, there was a tendency to attribute every late antique text or theory whose philosophical and scientific background could not be ascribed to any other author to the influence of Posidonius. If he contributed so much to the various fields of knowledge, it is also because he had Aristotle as a model. We know that Posidonius wrote several treatises about physics, meteorology and geography. In

²⁷ Ed. Ph.H. De Lacy & E.A. De Lacy (American Philological Association, 1941), revised ed. with the collaboration of M. Gigante, F. Longo Auricchio & A. Tepedino Guerra, Napoli, 1978.

²⁸ DK B 21a. For a commentary, see Diller (1932).

²⁹ 3.487–509.

these matters he was more of a follower than an innovator. Presocratic cosmologists expressed their views about observable phenomena and their causes, most of which have been transmitted to us by Aristotle's important treatise on *Meteorologica*, so that this text appears to us as the starting point of a long tradition of meteorological writings. The first occurrences of the makanthropic analogy are found in this text. Their author does not make a systematic use of this pattern but gives methodological legitimacy to it. One has to consider first the scientific scope of the treatise and define its formal characteristics. It is indeed a text about physical and natural phenomena, including all divisions of ancient meteorology (astronomy, atmospheric phenomena, hydrology and seismology). The object of the inquiry is thus the cosmos and the earth. Therefore if the scientist decides to investigate by using analogical arguments or models, physical and natural considerations can by no means serve as the illustration, the *phore* in the analogy, since they are the *thème*, which has to be illustrated.

It seems that Aristotle wrote his *Meteorologica* before his biological and zoological treatises.³⁰ Nonetheless, he already had, through his readings and own experiments, an extended knowledge in the fields of anatomy and physiology, and, on several aspects, the *Meteorologica* introduce and herald the other works to come. The first occurrence of the biological analogy is found in book 1 concerning the question of the travelling of waters and continents, about which the philosopher declares:

But we must suppose these changes to follow some order (τάξις) and cycle (περίοδος). The principle and cause of these changes is that the interior of the earth has its periods of maturity, like the bodies of plants and animals (τῆς γῆς τὰ ἐντός, ὥσπερ τὰ σώματα τῶν φυτῶν καὶ ζώων, ἀκμὴν ἔχει καὶ γῆρας). (1.14, 351 a 26–28, trans. by E.W. Webster)³¹

This idea of a cyclic periodicity, following the model of life, is recurrent in Aristotle's thought and will be systematized by Posidonius. If one is right to point out the influence of the Stoics on Posidonius'

³⁰ This is the prevalent opinion among the editors and commentators of his text; see ed. Louis, CUF, 1982, and Lee, The Loeb Classical Library, Cambridge-London, 1952.

³¹ *The Complete works of Aristotle*, The revised Oxford translation ed. by J. Barnes, vol. 1, Bollingen series LXXI.2, Princeton University Press, 1984 (first ed. by W.D. Ross, Oxford, at the Clarendon Press, 1923).

system, since the theory of cyclic time is a basis of Stoic cosmology and theology, one finds here an example of what posterity owes to Aristotle as well. Here, the idea is expressed in a very general way and Aristotle gives no further development or explanation, but the method is exposed: life can be used as an example to understand natural phenomena.

Book 2 starts with a review of different theories about the origin of the sea and its salinity. Among other explanations, Aristotle asserts that some authors say that the sea is a kind of sweat exuded by the earth when the sun heats it, which explains its saltiness, all sweat being salty.³² By his very presentation of this analogy, Aristotle suggests that the theory cannot be taken for granted. Later on, he returns to it, attributing it to Empedocles.³³ The whole explanation is then dismissed but a new question arises: why is sweat salty? Here we leave meteorology for biology and Aristotle tries to solve this problem,³⁴ which is given no solution anywhere in his biological writings. Another question had previously been introduced about the sea:³⁵ what is its natural location? The difference between fresh water and salt water leads to a question about the natural place of water among other elements, since fresh water is light and evaporates into the sky, which might be its natural location. For Aristotle, the proper place of water is, without any doubt, where the sea is. Salt water remains there because of its weight. Fresh water is lighter, remains on the surface and evaporates, before going back to its natural place. In order to give a more comprehensive explanation of the phenomenon, another physiological paradigm is given: salt water is heavier and accumulates in the deepest parts of the earth exactly as the excremental residue—found to be bitter and salt—does in the stomach. But our stomach is also a receptacle for liquid food, which disappears from it quickly and passes into the flesh and the other parts of the body.³⁶ In 2.3, 358 b 10–12, one finds another observation, about the relationship between the heat of the stomach and the heat

³² 2.1, 353b 11–13.

³³ 2.3, 357a 24–357b 21. See fragments DK 31 A 66 and 31 B 55.

³⁴ 2.3, 358a 3–14.

³⁵ 2.2, 355a 32–355b 20.

³⁶ On this process, see *Parts of animals* (*De partibus animalium*), 2.3, 650 a 2–b 32 and 3.14, 675 b 12–676 a 5. This comparison between the stomach and the sea is similar to the analogy in *Regimen*, 1.10, and *De hebdomadibus*, 6.

of excrement, which is absent from the biological treatises. We have here two examples of the important part played by biology in meteorological thought. Not only does Aristotle use it as a model but he also adds developments, partly exceeding those given in other parts of his work.³⁷ On winds too, Aristotle refers to what happens in our stomach to explain the way they come to rise; he observes that they originate from the interaction between dry and humid exhalations, that change places.³⁸ Once again, the meteorologist asserts his theory by calling upon the testimony of a physiological fact:

Just as in the case of the body when the stomach is dry (ἐὰν ἡ ἄνω κοιλία ξηρὰ ᾖ), the lower body is often in the contrary state (τὴν κάτω ἐναντίως διακεῖσθαι), and when it is dry the stomach is moist and cold (καὶ ταύτης ξηρᾶς οὐσης ὑγρὰν εἶναι τὴν ἄνω καὶ ψυχρὰν), so it often happens that the exhalations (τὰς ἀναθυμιάσεις) reciprocally take one another's place and interchange.

One might present a final example of such analogies in the *Meteorologica* and comment on a passage that scholars often quote. In book 2, Aristotle explains how earthquakes are caused by winds confined under the surface of the earth, yet another aspect of the exhalations theory. After dealing with the various kinds of earthquakes and their effects, he illustrates his development with a very precise and striking comparison:

We must suppose the action of the wind in the earth to be analogous to the tremors and throbbings (τρόμων καὶ σφυγμῶν)³⁹ caused in us by the force of the wind (τοῦ πνεύματος) contained in our bodies. Thus some earthquakes are a sort of tremor (τρόμον), others a sort of throbbing (σφυγμόν). Again, we must think that the earth is affected as we often

³⁷ One can make the same remark about Hippocratic thought: what we learn about cosmology in the medical writings is often more detailed than what we find among the Presocratics. Of course, we have preserved only fragments of the Presocratic theories; but one may state that, in some aspects, medical writers exceeded the models that philosophers had left to them.

³⁸ 2.4, 360 b 22–26. This theory of exhalation (*anathumiasis*) is the core of Aristotelian meteorology.

³⁹ Such a distinction seems to refer to a precise pathological context or, at least, to accurate observations on living beings. For the exact meaning of σφυγμός by Aristotle, see *On Youth, Old Age, Life and Death, and Respiration* (*De iuuentute et senectute, de uita et morte, de respiratione*), 26, 479b 17–480a 15 (*Parva Naturalia*, ed. Ross, Oxford, 1955), where Aristotle establishes the difference between palpitation (πήδησις), pulsation (σφυγμός) and respiration (ἀναπνοή). But the second has apparently no other meaning than “internal movement or beating of the body”, according to Pigeaud (1978).

are after urinating—for a sort of tremor runs through the body as the wind returns inwards from without in one volume.

The force wind can have may be gathered not only from what happens in the air (where one might suppose that it owed its power to produce such effects to its volume), but also from what is observed in animal bodies. Tetanus and spasms are motions of wind (οἱ τε γὰρ τέταννοι καὶ οἱ σπασμοὶ πνεύματος μὲν εἰσι κινήσεις), and their force is such that the united efforts of many men do not succeed in overcoming the movements of the patients. We must suppose, then (to compare great things with small) (ὥς εἰκάσαι πρὸς μικρὸν μεῖζον), that what happens in the earth is just like that. (2.8, 366b 14–29)

This pattern, the throbbings of the body, appears again in 2.8, 368a 6–11; it will also be used by Seneca in his *Natural Questions*. The whole passage has to be compared to the Hippocratic treatise *Breaths* (*De flatibus*),⁴⁰ which ascribes the cause of diseases to the breaths (*phusai*) inside the body. Its author also deals with various sorts of observable tremors and throbbings: *phrikai*, *rhiga*, *sphugmoi*, *tromoi*. The words *tetanoi* and *spasmoi* are also specific to the language of medical practitioners and theoreticians. One may of course wonder about Aristotle's medical readings. This is quite difficult since the philosopher had personal and extensive knowledge of anatomy and physiology.⁴¹ Consequently, it would be irrelevant to try to ascribe each and every accurate and detailed description by Aristotle to a Hippocratic or medical treatise. Nevertheless, even though Hippocrates of Cos is never explicitly quoted in the *Meteorologica*, a few passages are very similar to the treatise *De aere, aquis, locis*. Aristotle's explanation of rain, for example, bears a resemblance to the traditional explanation given by the Hippocratic writer.⁴² Two other passages could allude to *De flatibus*.⁴³ In her article about "The role of doxography in the *Anonymus Londinensis*",⁴⁴ D. Manetti reminds us that the first part of Aristotle's *Problemata*, the so-called 'medical problems', gives a definition of disease and a series of questions on pathological phe-

⁴⁰ 6.90–115 L.; ed. Jouanna, CUF, V/1, Paris, 1988.

⁴¹ In addition to his personal studies, one may keep in mind the fact that his father, Nicomachos of Stagira, was known as a physician, as observed by Jaeger (1957).

⁴² See above.

⁴³ 1.13, 349 a 16; 2.4, 360 a 20.

⁴⁴ Manetti (1999).

nomena that are prompted by in-depth knowledge of medical texts, some of the Hippocratic texts being recognizable and extensively used, such as *De aere, aquis, locis*.⁴⁵

ENTRAILS OF THE EARTH, DEPTHS OF THE BODY:
SENECA'S *NATURALES QUAESTIONES*

When he began to write his treatise on *Naturales quaestiones*, Seneca aimed at presenting an exhaustive doxographical account of the various theories of meteorological matters. Aristotle had defined the scope and limits of this scientific field and, even though the title given by Seneca to his work does not explicitly refer to meteorology, the Roman writer establishes himself as the heir of a long philosophical tradition. Many passages of the *Naturales quaestiones* are directly borrowed from the *Meteorologica*. From them, one might presume that Seneca read Aristotle; whenever he quotes the Presocratics, such as Anaxagoras or Empedocles, he does so through Aristotle's version of their theories.⁴⁶ His quotations of Aristotle are often approximative and partial but the ground is Aristotelian. But, as he presents a global view, the Roman philosopher also borrows from other sources and presents his own interpretations.⁴⁷

The extensive use of analogy by the author seems to be specific to his scientific approach. In fact, analogy is quite a systematic pattern of his meteorological developments which goes far beyond the Aristotelian way of putting things. One might of course make a clear distinction between two figures, metaphor and analogy, the first being a stylistic and rhetorical device—also characteristic of Seneca's style—and the second a heuristic tool, a way of arguing and proving.⁴⁸ Most of the comparisons between the *cosmos* and the body are, not surprisingly, to be found in the parts dedicated to waters and to

⁴⁵ On the special relationship with this treatise see Jouanna (1996). For the *Epidemics*, see Bertier (1989).

⁴⁶ See Hall (1977).

⁴⁷ See Waiblinger (1977).

⁴⁸ Armisen-Marchetti (1989) has dedicated an extensive study to this question. In a chapter which deals with the *Naturales quaestiones* she shows that Seneca uses analogy as a scientific tool and that, in most cases, one must speak of analogical thought rather than metaphore. The systematic survey she makes of this pattern reveals the importance of the anatomical and physiological analogy in Seneca's text.

earthquakes. The correspondance between celestial or atmospheric phenomena and human physiology or pathology is generally less obvious and more difficult to establish, whereas the assimilation of Earth to a giant body appears to be a natural topic for a Stoic philosopher. The first occurrence is when, in book 3, Seneca sets the structural analogy between the internal parts of the earth and the internal parts of our body:

The idea appeals to me that the earth (*terram*) is governed by nature and is much like the system of our own bodies (*ad nostrorum corporum exemplar*) in which there are both veins, receptacles for blood, and arteries, receptacles for air (*uenae sunt et arteriae, illae sanguinis, haec spiritus receptacula*). In the earth also there are some routes (*alia itinera*) through which water runs, some through which air passes. And nature fashioned these routes so like human bodies (*ad similitudinem humanorum corporum*) that our ancestors even called them ‘veins’ of water (*aquarum uenas*).

(3.15, 1, trans. by T.H. Corcoran)⁴⁹

The idea here is that the earth might have specific roads for air and water to pass through and move. The text goes on, developing the analogy and stating that, since our body contains all kinds of humours (the brain in the head, marrow in the bones, mucus, saliva, tears, and synovia), the earth must also contain under its surface various fluids and substances.⁵⁰ Two remarks on this statement: first, on a formal and logical level, the direction taken by the analogy presents the human body as the reference;⁵¹ second, regarding its content, it reflects precise physiological concepts, which have been long debated in the various schools of thought. The problem of the distinction between veins and arteries is indeed central to anatomical investigations since Herophilus and Erasistratus. We know that Praxagoras, during the fourth century BCE, had already determined the functional difference between those carrying blood, and those containing air, but this theory is accredited to the research of the Hellenistic

⁴⁹ Ed. Oltramare, CUF, Paris, 1929, and Corcoran, The Loeb Classical Library, London-Cambridge, 1971–72; see also ed. Hine, B.S.G.R. Teubneriana, Stuttgart-Leipzig, 1996.

⁵⁰ 3.15, 1–8.

⁵¹ Pigeaud (1985) gives the following definition of ancient physiology: “Le corps, dans la médecine antique, est essentiellement une chose poreuse, percée d’une infinité de trous, de canaux, les uns perceptibles aux sens, les autres non, dans lesquels circulent des liquides et de l’air.”

period.⁵² The reason why it is not preposterous to say that Seneca takes analogy seriously as a real scientific tool is that he also shows his awareness of its limits and dangers. In book 5, he affirms that every physiological analogy cannot be taken for granted. On the question of the winds that blow under the surface of the earth, he derides a comparison with the process of digestion: in our bodies, flatulence is caused by food and its emission is of great offence to our senses. In the same way, people think (*putant*) that the great nature of the world (*magnam rerum naturam*) emits air in digesting its nourishment. And he ironically concludes: “we are lucky that nature always digests thoroughly what she consumes, otherwise we might fear a more offensive atmosphere”.⁵³ What is questioned here is not the use of analogy as a way to understand an unexplained phenomenon but the use of a wrong analogy: one may not extend every physiological process to natural phenomena, one must be able to distinguish what our body and the whole world share in common. In order to show that the digestive analogy is irrelevant, Seneca, by a *reductio ad absurdum*, pretends to take it for granted and draws the immediate conclusions, which cannot be taken seriously. The strategy of the philosopher consists of proving the absurdity of certain analogies to assert the relevance of his own.

The most appealing part of the *Naturales quaestiones* is probably book 6 on earthquakes. In this last part of his treatise, Seneca gives to his thought an original turn by detailing the analogy and presenting very personal views. This is also the part where he constantly refers to *spiritus* as the universal agent, giving to his account an explicit Stoic background. One passage is a long description of the internal movements of our body:⁵⁴ our body is irrigated by blood and also by air (*sanguine irrigatur et spiritu*), which runs along by its own routes. We have some narrow receptacles for breath (*receptacula animae*) through which air does nothing more than pass, others wider in which the air is collected and from there distributed to the parts of the body. In the same way the whole body of the earth (*totum terrarum omnium corpus*) is a passage way both for water, which takes

⁵² Such a distinction belongs to the common scientific knowledge of Seneca's contemporaries, since it is found by Cicero, *On the Nature of Gods* 2.138, and by Pliny, 11.219–220.

⁵³ 5.4, 2.

⁵⁴ 6.14, 1–2.

the place of blood, and for winds (*uentis*), which one might call simply respiration (*animam*). These two elements run together in some places and are stationary in others. But in our body the movement of the veins (*mobilitas uenarum*) also preserves its rhythm undisturbed while there is good health but when there is something wrong the movement pulses more rapidly and inhaling and exhaling give signes of effort and exhaustion. In the same way, the earth remains unshaken as long as its condition is normal. When something is wrong, then there is motion just like that of a sick body, because the air which was flowing through it in an even pattern is struck violently and causes its veins to shake. Before commenting, one may compare this passage with another:

Our bodies also do not tremble (*non tremunt*) except when some cause disturbs the air inside (*spiritum*), when it is contracted by fear, grows weak in old age, becomes feeble with sluggish veins, is paralysed by cold, or is thrown from its normal course under an attack of disease (*cum timore contractus est, cum senectute languescit et uenis torpentibus marcet, cum frigore inhibetur aut sub accessionem cursu suo deicitur*). For, as long as the air flows without damage and proceeds in its usual way, there is no tremor in the body; when something happens which inhibits its function (*officium*), then it no longer is strong enough to support what it had maintained (*his quae tendebat*) in its vigour. As it fails it causes to collapse whatever it had sustained when it was intact. (6.18,6)

These two descriptions are very close since they present the same analogy of the earth as an intricate network of canals and galleries. Under its surface, numerous fluids circulate and, above all, air, whose state and movements determine the state of the whole. The observations on pulse and its rhythm, on fever and its progression, reveal a certain level of clinical knowledge. Is there a specific medical theory behind such assumptions? Does Seneca refer to the *doxa* of a specific school or does he draw on a general medical culture that was widespread in the philosophical and intellectual circles of his time? The answer is of course difficult and amounts to studying the role played by medicine in his entire work. As a Stoic philosopher, he might have been aware of the theories of the pneumatic school of medicine, and the important part *spiritus* plays in his representation of the world would naturally lead us to refer his meteorological theories to this sect. His letters to Lucilius, and his praise for such therapeutic practices as baths and *gestatio*, are an indication of his familiarity with the methodic school as well. For the Methodists,

who partly inherited the theory of Asclepiades of Bithynia,⁵⁵ health relies on the equilibrium between congestion and flow in the body. As we see in Seneca, and more generally in the whole meteorological tradition, the very notions of congestion and flow are at stake for the understanding of earthquakes, whether theoreticians chose water or air as the agent.

One may remark that Seneca had already stated that the tension of the air (the stoic *tonos*) was the only possible explanation for natural movements.⁵⁶ After showing that even plants possess an irresistible strength due to their *spiritus*, he explains muscular strength according to the same principle:

Well, what about running (*cursus*) and all motion (*motus omnis*)? Are they not the effects of air in tension (*intenti spiritus*)? This is what gives strength to sinews (*neruis*), speed to runners. When air is violently agitated it twists upon itself, carries off tress and woods, snatches up entire buildings and shatters them. Air stirs up the sea, which is quiet and motionless by itself. (2.6.4)

Once again, the demonstration naturally shifts from a physiological process to a meteorological phenomenon. What happens in our muscles has its equivalent in the surrounding world.

Finally, as the idea of air as the universal agent seems to be generally admitted⁵⁷ among Seneca's contemporaries, the discussion focuses on a more specific problem, which is the location of air under the surface of the earth: are the causes of earthquakes located at the very surface or are they more profound? Here, it is again thanks to a physiological comparison that Seneca is able to give an answer to what seems to be a much debated question:

And I myself agree that the cause of this disaster is air (*spiritum*). But I will argue about how this air enters the earth, whether through thin openings undetectable to the eyes or through larger and more extended openings (*utrum per tenuia foramina nec oculis comprehensibilia an per maiora ac patentiora*), and whether it comes only from the depths or also through the surface of the earth (*et utrum ab imo an etiam per summa terrarum*). This last is unbelievable. For even in our bodies the skin keeps out

⁵⁵ On Asclepiades' theory and its origins, see Vallance (1990).

⁵⁶ The idea of *pneuma* being responsible for bodily movements is also aristotelian, as stated in the second part of *De motu animalium*.

⁵⁷ Even the epicurean meteorology admits that air is the cause of seismic phenomena; see Epicurus' *Letter to Pythocles*, 23–24.

the air, and air has no way in except by way of the parts through which it is breathed in (*cutis spiritum respuit nec est illi introitus nisi per quae trahitur*), and even when it has been inhaled by us it cannot settle except in the relatively open part of the body (*nec consistere quidem a nobis receptus potest nisi in laxiore corporis parte*). For it does not remain within the sinews or flesh but in the viscera and the wide cavity of the interior region (*non enim inter nervos pulpasue sed in uisceribus et patulo interioris partis recessu commoratur*). (6.24,1–2)

The philosopher states that air cannot pass through the surface of the earth (*i.e.* the skin) directly, but that movements from inside to outside, or outside to inside, are possible thanks to specific ways and cavities, that we might call respiratory organs. Here the analogy between the skin of our body and the surface of the earth is complete. One finds with this passage an echo of an ancient medical debate on the respiratory system. The idea of respiration through the pores of the skin was first illustrated by Philistio of Locres and, although it was partly rejected by posterity, remained central in many medical and biological discussions.⁵⁸ Seneca's argumentation obviously refers to this doctrinal point.

BACK TO THE HIPPOCRATIC CORPUS: *DE HEBDOMADIBUS*

As mentioned above, several of the treatises that make up the Hippocratic corpus begin with more or less extended statements about the physical composition and operation of the world at large, and approach the study of human physiology from this angle. As M.L. West⁵⁹ has pointed out, the work known as *De hebdomadibus* would appear to be a prime example of the type, since the first twelve chapters are cosmological. But a close reading shows that the direction taken by analogy is dual. The opening paragraph states the principle that the world has seven parts, and so has each thing in it.⁶⁰ The next paragraph begins with the description of the seven strata of the natural world; it seems that it is primarily the macro-

⁵⁸ See Harris (1973) 1–28; and also Gourevitch (1989).

⁵⁹ West (1971).

⁶⁰ For the reading of this text, mostly transmitted to us through a Latin translation thought to have been made in the early sixth century, one might refer to West's article.

cosm that the writer has in view; then corresponding strata will be found in the human body. Of these seven strata, the outermost part is said to be the *akriton*, later called “the Olympian cosmos” (ὁ Ὀλύμπιος κόσμος) and an “undivided concretion” (ἄκριτον πάγος), cold like the skin. Such terms have counterparts in the Presocratics and their doxographers, as M.L. West has shown.⁶¹ But one might also refer to the Hippocratic treatise *Regimen*, 1.10, which uses the expression *ton periechonta pagon* to designate both the skin and the firmament in a similar macro-microcosmic system. M.L. West’s study also points out that the same treatise suggests an explanation of the mysterious ‘passage(s) of summer and winter’ that the *cosmos* is supposed to have according to the writer of *De hebdomadibus*.⁶² In *Regimen*, 1.10 and 23,⁶³ the body is said to be provided with “Passages of cold and hot breath, outward and inward” (διέξοδοι πνεύματος ψυχροῦ καὶ θερμοῦ, ἔξω καὶ ἔσω). Plato’s *Timaeus* brings further clarification (79d): there are two *diexodoi*, the pores of the skin and the respiratory tract, by which the entering and departure of cold and warm air is controlled. The passages of summer and winter in *De hebdomadibus* must be a macrocosmic analogue of this physiological system. If it is so, instead of using the adjective macrocosmic, one should rather speak of makranthropic analogy, since physiology stands here as a theoretical model. This passage would then be the first example of the makanthropic analogy in the Hippocratic corpus. But it is not a unique example since two other chapters follow the same pattern. One may read chapter 6 to illustrate this analogical reversal: the seven parts of the world are related to the parts of the body. According to the first sentence, the parallelism extends to all animals, and trees too, but in what follows only man is considered. The nature of the relationship, if the Latin version may be trusted, is expressed indifferently in terms of similarity (*similis*, *similiter*), imitation (*imitatio*) of man by the world. The stony interior of the earth corresponds to the bones, the weaker parts surrounding it to the flesh. The terrestrial waters correspond to the liquid parts of man: hot springs to the spinal marrow and semen; rivers to the veins;

⁶¹ p. 372.

⁶² μῖν μὲν (ἐν) πᾶσι τάξιν τὴν τοῦ ἀκρίτου κόσμου, (δι)εξ[όδους] ἔχοντα θέρεος καὶ χειμῶνος (1.2, 1–2).

⁶³ 6.484 L.; 12 Joly/6. 496 L.; 18–19 Joly.

ponds and marshes to the bowels; seas to the visceral fluids. The air is breath in the body, etc. This chapter reminds us of Seneca's *Naturales quaestiones* or Aristotle's *Meteorologica*. Once again, M.L. West refers this analogical pattern to *Regimen* and to the *Timaeus*, but what he does not mention is the fact that in *De hebdomadibus* the pattern is reversed. The relationship between the *cosmos* and the body is the same in these three texts, but not the direction taken by the demonstration. On the same level, chapter 10 states that our body is divided into seven parts; the following chapter (11) immediately shows how the earth's surface is divided into seven, each part corresponding to one part of the body.

Are these three examples of a makranthropic vision of the world in a Hippocratic work indicative of anything concerning the date and origin of the treatise? It would seem quite inappropriate to base a demonstration upon such a specific observation. Nonetheless, one has to say that this peculiar feature is yet another element to add to the debate around this treatise. It stresses, among other characteristics, its originality in the corpus of Hippocratic writings. It seems to be the only Hippocratic treatise where the traditional micro-macro-cosmic analogy is given a dual direction.

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ABOUT PHILOSOPHY AND HUMOURAL MEDICINE

Paul Demont

Summary

The polysemy of χυμός, which can mean “humour” as well as “flavour”, “taste” (e.g. in Democritus’ On Tastes) and “juice”, places Hippocratic medicine in the context of epistemology (and cookery). The treatment of humours in Ancient Medicine can help us to understand the second version which Plato gives of Protagorean epistemology (the so-called Apology in Theaetetus). Plato himself, in his discussion of health, and even in his explanation of diseases in the Timaeus, often seems reluctant to refer to a medical typology of humours. Aristotle is equally reticent on the subject. Yet the complexity of the Aristotelian stance can shed light on some problems in Aristotle’s ethical analysis, in particular the problem of intemperance.

It is well known that classical Greek philosophy has been thoroughly influenced by medicine. This paper aims to concentrate on that part of Hippocratic medicine which is related to the action of the humours in the body, and, in particular, on one aspect of the reception of this humoral medicine in philosophy, namely, the interplay between a position which endorses the tenets of humoral medicine and one which retains a certain scepticism towards the humours. Only a few points in this program will be addressed: first, I will trace some aspects of the Platonic discussion of the Protagorean relativism; I will then describe a recurrent way of speaking, or rather of not speaking, about the varieties of humours, which occurs in both Plato and Aristotle, and which contrasts with the progressive integration of humoral typology in the analysis of character.

Humoral medicine in the Hippocratic corpus is not, of course, the *communis opinio* about humours which is often attributed to “the Ancients” by Galen in order to sustain his own positions, as in his *On the Natural Faculties*.¹ If we leave aside these four humours of *Nature*

¹ *De naturalibus facultatibus* 2.8–9 (p. 181–203 Helmreich; 2.110–140 K). Cf. Diocles of Carystus, fr. 27 (ed. van der Eijk, Leiden, 2000).

of *Man*, and focus rather on *Ancient Medicine*, we read that there are diseases which “arise from powers” (δυνάμεις), i.e., from “an intensity and strength of the humours” (τῶν χυμῶν τὰς ἀκρότητάς τε καὶ ἰσχύν),² and that one should “examine the powers of humours, and what the effect of each is upon man, and how they are related to one another.” For example, “if a humour that is sweet assumes another form” (εἰ γλυκὺς χυμὸς ἐὼν μεταβάλλοι ἐς ἄλλο εἶδος), it is necessary to know whether it becomes “bitter, or salt, or astringent, or acid” (πικρὸς ἢ ἀλμυρὸς ἢ στρυφνὸς ἢ ὀξύς).³ Humours are here specified in terms of taste. “Flavour” or “taste” is one of the most frequent meanings of this rather frequent word for “humour”, χυμός. The relationship between these meanings suggests polysemy, not homonymy. Humours are flavours flowing in the body.⁴ Humoural medicine, as it is explained at the beginning of *Humours*, facilitates the useful, natural flow of the humours, prevents its disruption and integrates the effects of their natural transformations.⁵ A third meaning, “juice”, especially juice of plants,⁶ together with the meaning “flavour”, explains the importance of χυμοί in the art of cookery, and conversely, emphasises the influence of cookery upon medical theories. Here is a fragmentary, but nevertheless effective, speech of a comic cook, who is well read in philosophy and medicine, and thus in the position of knowing how to harmonize flavours *vel* juices *vel* humours:

² *De vetere medicina* 22.1 (p. 149 Jouanna; 1.626 L.), transl. W.S. Jones, Loeb, 1923.

³ *Vet. Med.* 24.1 (p. 153 Jouanna; 1.634 L.); the transformation from sweetness to acidity, which is mentioned afterwards, may be implicitly based on the transformation of “sweet wine” to “vinegar” (cf. Jouanna (1990) 220 n. 8, with references to Jones and Lloyd); see also Aristotle, *De sensu et sensibilibus* 4, 441 a 10–18 (against Empedocles’ thesis about water): “We find flavours changing under heat, when pericarpal fruits are picked and dried in the sun or at a fire; which shows that the juices do not owe their nature to drawing flavour from water but change in the fruit itself (. . .) In time they become, instead of sweet, harsh or bitter, or assume various other tastes; and when they ferment, change into almost every kind of flavours” (transl. W.S. Hett, Loeb, 1957). It may be that the relationship between phlegm (sweet) and bile (bitter) in *Met.* H.4.1044 a 15–23 is similar.

⁴ They can also be distinguished by their colours, as flowers, a comparison which opens *Humours* (*De humoribus*) 1 (4.62 Jones; 5.476 L.). Cf. Demont (2004).

⁵ Cf. Demont (1999) and (2002).

⁶ E.g. *Epid.* 6.6.3 (p. 126 Manetti-Roselli; 5.324 L.), with the references given by Manetti-Roselli (1982) 127: “come sinonimo di χυλός è usato p. es. in *Vict.* II 54 (VI, 560, 19) (. . .), 42 (VI 540, 17) (. . .). In stretta relazione con *De victu* è anche la menzione della δύνάμις di tali medicamenti” (or juices of plants which are used in cookery).

- “That is why the flavour (χυμός) concentrates everywhere evenly . . .
- The flavour?
- So speaks Democritus. And no stoppage occurs that makes the eater gouty.
- It seems to me that you have some acquaintance with medicine !”⁷

In this fragment of Damoxenus, there is an explicit (and comic) reference to Democritus, and an implicit one to his book *On Tastes* (Περὶ χυμῶν)⁸ and this reference is immediately linked to medicine. As a matter of fact, in the doctrine of “tastes” which is attributed to Democritus by Theophrastus, we find the same elements which appear in *Ancient Medicine* with respect to the “humours”, i.e., the “bitter taste” (πικρός), the “salty one” (ἄλμυρός), the “astringent one” (στρυφνός), the “acid one” (ὀξύς), all of which are described in their material reality. These “tastes” (χυμοί or χυλοί: there are some discrepancies in the manuscripts) are at the same time “flavours” and material substances, that is “humours.” The main difference between Democritus and the author of *Ancient Medicine* is that the philosopher describes the flavours as “figures” (σχήματα), thus extending to the humours a geometric notion of “figure” which the physician only applies to other elements inside the body, but not to the humours, which are described by medical writers as “powers” (δυνάμεις).⁹

The second of the two Platonic discussions of Protagorean relativism¹⁰ in the *Theaetetus* refers to the kind of “humours” *vel* “tastes” with which men can operate, since they are material realities. It is well known that in the first discussion,¹¹ Socrates identifies knowledge with “sensation” (αἴσθησις), and immediately adds that the famous *homo mensura* thesis of Protagoras is another way of saying that science is sensation. There is an evident similarity between this first text and *Ancient Medicine* 9, where the characterisation of “man”

⁷ Damoxenes, Fragm. 1 K.-A., v. 17 and 29–32, with V. Schmidt’s *emendatio*: cf. Roselli (2000) 168–169.

⁸ Cf. Diog. Laert. 9.46. Note the Democritean use of συμπλέκεσθαι about the ὄφαι in Damoxenes (v. 42, cf. DK 68A43 and 119). About the arithmology of tastes (v. 54–58), see also Aristote, *De sensu* 442 a 16.

⁹ Cf. Theophrastus, *Fragmentum de sensibus* 65–67 in Diels (1889) 517–519 (DK 68A130). About the “highly problematic” interpretation of Democritus’ epistemology, cf. Taylor (1999) 216–222 (who does not discuss the meanings of χυμός).

¹⁰ I am speaking here of the Platonic representation of Protagoras (who identifies the *homo mensura* with sensation, and invents the Apology), not of Protagoras himself.

¹¹ *Theaetetus* 151 e 1–152 a 4.

as “measure” is also explained by means of “sensation.” In *Ancient Medicine*, this sensation is τοῦ σώματος, i.e. “the feeling of the body”: it seems to refer to the patient’s feeling, as Jacques Jouanna and others have argued. There is also an obvious difference: *Ancient Medicine* in no way presents a subjectivist argument, “the feeling of the body” requires an interpretation, and it is the doctor’s interpretation of it that matters.¹² But afterwards in the *Theaetetus*, in the so-called Apology of Protagoras, which George B. Kerferd aptly labels the “modified doctrine”,¹³ the possibility that this feeling may be modified by the physician, or, in other cases, by anyone who “knows” (σοφός), is very strongly asserted:

His food appears and is bitter (πικρά) to the sick man, but appears and is the opposite of bitter to the man in health. Now neither of the two is to be made wiser than he is—that is not possible—nor should the claim be made that the sick man is ignorant because his opinions are ignorant, or the healthy man wise because his are different; but a change must be made from the one condition to the other, for the other is better.¹⁴

In fact, the patient’s feeling of sweetness or of bitterness is the criterion not only of the patient’s reality, but also of the physician’s: it is reality. Keeping in mind the definition of humoral medicine which

¹² *Vet. Med.* 9 (p. 128 Jouanna; 1.588–590 L.). “The patient’s feeling” are the words of T. Cole (1972) 23. Bibliography (except Cole) in Jouanna (1990) 174, with the conclusion that this is “la sensation (ou la sensibilité) du malade face au régime” and not “la sensation du médecin face au corps du malade”. Cf. Tracy (1969) 39: “Festugière (59 n. 69) shows that the author of *AM*, in setting up the responsiveness or the response of the individual body as μέτρον, is *not* adopting the relativity of Protagoras, but regards medicine as a τέχνη with generally valid laws based upon observation and experience”; and Jouanna (1990) 174: “Bien que la formulation rappelle ici Protagoras, la distance est grande entre les deux penseurs. Car si l’αἰσθησις du malade est, chez Protagoras, le critère de la réalité pour le malade, elle est, chez l’auteur de l’*Ancienne Médecine*, le critère de la réalité pour le médecin”. Festugière, Tracy and Jouanna do not take into account the Apology of Protagoras, in which the distinction between these two “sensations” seems to be challenged, as Cole suggests (without any reference to humoral medicine). Jaeger (1957) 56 compares Aristotle, *EN* 2.9, 1109 b 23.

¹³ Kerferd (1981) 105. This point is often neglected. Even if it is difficult to trace the real doctrine of Protagoras, Taylor (1999) 220 seems to go too far in his contrast between Protagoras and Democritus: “In the Protagorean world there is nothing more to reality than the totality of equipollent appearances. For Democritus, by contrast, the reconciliation between the equipollence of appearances with the objectivity of the physical world requires the gap between appearance and reality.”

¹⁴ *Theaetetus* 166 e–167 d *passim*, transl. H.N. Fowler (Loeb, 1921).

I have just proposed, it should be noted that it is the humoural reality of his experience of taste that explains the patient's feeling, and it is the physician's task to identify this reality which patently "is" (it is a *χυμός*), i.e., to let the patient know that he has understood his sufferings, without speaking of anything other than this reality, this bitterness or this sweetness which he feels, as the author of *Ancient Medicine* says in chapter two, and as Plato says in his *Apology* of Protagoras.¹⁵ The physician corrects the humoural disturbance, either through drugs or other forms of treatment,¹⁶ thus creating a new, and better, humoural reality, although not a truer one. This reference to humoural medicine, in *Ancient Medecine*, could, I would suggest, help us understand the uneasy transition from the subjectivist relativism of the *homo mensura* to the *Apology* of Protagoras and its authoritative assertion of knowledge in Plato's *Theaetetus*.¹⁷

In this way humoural medicine proves itself a useful explanatory model for philosophers. Before reaching the Platonic use of humours, I would like to make a brief reference to Thucydides' famous description of the Plague.¹⁸ Everybody knows that the historian is well-read in Hippocratic medicine, and that nevertheless, his description is addressed not only to physicians, but also to laymen.¹⁹ There is a peculiarity in his narrative which is obviously related to this double readership. Describing the symptoms of the plague *a capite ad calcem*, Thucydides notes that "vomits of bile of every kind named by physicians ensued" (καὶ ἀποκαθάρσεις χολῆς πάσαι ὅσαι ὑπὸ ἰατρῶν ὀνομασμέναι).²⁰ Does he know all the names of these varieties of vomit (note that these are varieties of vomit, not of bile)? Does he think that the ability to distinguish between these varieties is useless in such a terrible plague? At any rate, he refrains from explicitly invoking this particular point of medical knowledge. Contrast the

¹⁵ Cf. *Vet. Med.* 2.3 (120 Jouanna; 1.572 L.): οὐ γὰρ περὶ ἄλλων τινῶν οὔτε ζητεῖν οὔτε λέγειν προσήκει and *Theaetetus* 167 a 1: οὐδὲ κατηγορητέον ὡς ὁ μὲν κάμων ἀμαθὴς ὅτι τοιαῦτα δοξάζει.

¹⁶ By means of different uses of μεταβολή. Cf. Diès (1926) 135, Jouanna (1980) 299–319, Demont (1991) 11–28.

¹⁷ Is this the actual Protagorean thesis, or is it Platonic rewriting? It is of course impossible to answer; in any case, there are more similarities between the discussion in *Theaetetus* and *Ancient Medecine*, than between *Ancient Medecine* and the words of Protagoras himself.

¹⁸ Cf. Demont 1996.

¹⁹ Thuc. 2.4.3.

²⁰ Thuc. 2.49.3, transl. C.F. Smith, Loeb, 1919.

descriptions in the *Epidemics*, and the nuances of colour they use. For example, in the fifth case of the first Book, the fifteenth day, “vomited fairly frequently bilious, yellow vomit” (χολωδέα ξανθὰ ὑπόσυχνα), [. . .] about the twentieth day, “scanty bilious, black vomit” (ἤμεσε χολωδέα ὀλίγα μέλανα).²¹ Contrast indeed the proud first person plural of *Ancient Medicine*, where the doctor comments upon the case when “there is an outpouring of the bitter principle, which we call yellow bile” (ὅταν πικρότης τις ἀποχυθῇ, ἣν δὴ χολὴν ξανθὴν καλέομεν).²² In the intellectual scope of the end of the fifth century, to study the varieties of gall vomit, to give them names, and moreover to name varieties of bile, is plainly a task which physicians may claim as their own, and which laymen leave to them.

We find this kind of position again in Plato, but with new connotations. In the *Republic*,²³ Socrates is said to dislike the manner of speaking of those “ingenious sons of Aesculapius” with all the “new-fangled and monstrous strange names (ὀνόματα) of diseases” that they invent, for example, κάταρροι, “fluxes”: there is no explicit humoral qualification here, but presumably an implicit one, as only humours are flowing in the body. Not only are the physicians’ terminological innovations useless for the philosopher, they are symptomatic of a deep crisis in Athenian health and morals. Phlegm and bile are nevertheless a reality in the human being for Plato, but only when he is ill. Troublesome citizens should be expelled from the city as phlegm and bile from the body: the task of the good physician, like that of the good lawgiver, and of the good beekeeper, is “to be on his guard from afar against these two kinds [. . .], first and chiefly, to prevent their springing up, but if they do arise, to have them as quickly as may be cut out.”²⁴ Phlegm and bile are plainly pathological humours, to be cured by physicians. Several, but not all, aspects of the description of the second kind of diseases in the *Timaeus* are consistent with this characterisation. For the philosopher who ventures to speak about this medical subject, it is of the utmost importance to pinpoint the difference between natural processes in which blood is at work (the

²¹ *Epid. I* (p. 207 Kuehlewain; 2.696 L.); cf. Flashar (1966) 32, and *Index Hippocraticus* s.v. χολώδης III. de excrementis.

²² *Vet. Med.* 19.5 (p. 144 Jouanna; 1.618 L.).

²³ *Resp.* 3.405 d 1–6, transl. P. Shorey, Loeb, 1930.

²⁴ *Resp.* 8.564 b 5–6.

Greek verbs, *πηγνύναι*, *συμπηγνύναι*, *τρέφειν*, *συνιστάναι*, are about coagulating, nourishing and clotting),²⁵ and the process of liquefaction (*τήκεσθαι*) which destroys flesh and bones, and in which the blood “is diversified by colours and bitter flavours, as well as by sharp and saline properties, and contains bile and serum and phlegm of every sort” (*χρώμασι καὶ πικρότησι ποικιλλόμενον, ἔτι δὲ ὀξεύαις καὶ ἀλμυραῖς δυνάμεσι, χολὰς καὶ ἰχῶρας καὶ φλέγματα παντοῖα*).²⁶ On the one hand, Plato uses a vocabulary quite similar to *Ancient Medicine*, with these “powers” (*δυνάμεις*) of the different flavours,²⁷ and their colours: we find here the general frame of the Hippocratic humours. On the other hand, he speaks of the varieties of humours somewhat vaguely, all kinds being put together without any distinction, in a way which may also recall the sentence from Thucydides, which I quoted above. The philosopher, as the layman, does not need to be concerned by the varieties of humours. It is true that, afterwards, Plato proceeds to describe in some detail the different humours that are responsible for the different diseases. Yet, from the beginning, he does this in a very strange way. There is first a sentence about humours as flavours and colours, which could be read as an imitation, perhaps not an entirely serious one, of descriptions such as that found in *Ancient Medicine* 24 about the transformations of humours:

The black matter acquires a sharpness in place of its bitterness, when the bitter substance becomes more diluted; and at another time the bitter substance acquires a redder colour through being dipped in blood, while if the black matter is blended with this it turns greenish;²⁸ and again, whenever next flesh also is decomposed by the fire of the inflammation, a yellow matter is commingled with the bitter substance.²⁹

What is Plato’s aim as he leads his reader through these colours and flavours artistically mixed together? Clearly, it is the mixture itself which interests him:

²⁵ Cf. Demont (1978). I think that this point should be more stressed than it is in the seminal paper by Miller (1962).

²⁶ *Tim.* 82 e 5–8, transl. R.G. Bury, Loeb, 1929. In the same way as in the *Republic*, “as humours originating *para physin*, phlegm and bile have no natural function in the structures and processes of the body”, Miller (1962) 185, cf. Ayache (1997) 58.

²⁷ Joubaud (1991) 91 compares *Vet. Med.* 14.

²⁸ If *χλωδεις* should be read with Galen.

²⁹ *Tim.* 83 b 2–9.

To all these humours, the general designation 'bile' has been given, either by certain physicians or by someone who was capable of surveying a number of dissimilar cases and discerning amongst them one single type worthy to give its name to them all. All the rest that are counted as species of bile have gained their special descriptions in each case from their colours.³⁰

It seems to me useless to wonder whether this "someone" is or is not a physician.³¹ Plato apparently suggests that the good reader, even if he is not a physician, should be this "someone", and should sense the unity of this principle, despite the variety of colours and of flavours. Surprisingly enough, Plato then proceeds to such classifications, about the second and third classes of diseases, classifications that are, as Harold W. Miller points out, "essentially on the level of physics."³² Without discussing these passages, I would simply like to stress two points about Plato: first, the absolute opposition between blood as the humour of health, and pathological humours, a point severely criticised by Galen, who thinks he can show how much "at least in his book *On the Nature of Man* Hippocrates excelled Plato",³³ and second (notwithstanding these subsequent distinctions), the *a priori* philosophical rejection of medicine's classification of biles.

In Aristotle, *χυμός* is used in relation to sensation and epistemology, and carries the meaning of "flavour", as it did in Democritus and (perhaps) in Empedocles. The main word for humour is rather *ὕγρὸν* "fluid": the "fluids" are the uniform parts (*ὁμοιομερῆ*) which are tender and wet in the bodies of animals with blood. Several lists of these uniform parts in Aristotle show that they have nothing in common with Hippocratic classifications of the humours, for example, in *History of Animals*: "blood, *ichôr*, lard, suet, marrow, semen, gall, milk (in those who have it), flesh and analogous parts; so too, in another way, the residues, e.g. phlegm, and the excretions of the belly and the bladder",³⁴ or further, in the third book, another somewhat different list: "and, in addition, fat, suet, and the residues (dung, phlegm, yellow and black bile)".³⁵ We see that here, three of the

³⁰ *Tim.* 83 c 1–6.

³¹ Discussion in Brisson (1992) 275 n. 743, and Ayache (1997) 59 n. 19.

³² Miller (1962) 186. See also Brisson (1974) 449 sq. and Ayache (1997) 63.

³³ *On the Doctrines of Hippocrates and Plato (De plac.)* 8.5.26 (p. 511 Phillip de Lacy).

³⁴ *HA.* 1.1, 487 a 2–10, transl. A.L. Peck, Loeb, 1965, corrected for *ichôr*, about which cf. J. Jouanna and P. Demont (1981).

³⁵ *HA* 3.2, 511 b 9–10.

four Hippocratic humours named in *Nature of Man* are explicitly specified as “residues” (περιττώματα), a concept which does not appear as such in the Hippocratic corpus.³⁶ On the contrary, blood has an entirely different position in the body of animals with blood: in them, “blood is the only fluid which remains throughout the whole body, and throughout life so long as it lasts,”³⁷ and, Aristotle says as Plato, “the purpose of the blood in living creatures is to provide them with nourishment.”³⁸ Philip van der Eijk has rightly concluded, after having collected these and other similar passages, that, if it is true that Aristotle knows the four classical humours, nothing suggests that he knows a four-humour system, so that “hier kaum von hippokratischer *Beeinflussung* geredet werden kann”.³⁹

It may be that he avoids medical descriptions as well. Here are two texts which, I suggest, could be read in this way. First there is a passage from the *History of Animals* in which he refers to a human disease, a very unusual fact indeed. He is speaking about the inside of the mouth of animals with blood:

Right inside is another part, resembling a bunch of grapes, a pillar with prominent veins; if this gets moistened unduly and inflamed (ἐξυγρανθείς φλεγμήνη), it is called *staphulē* (σταφυλή, *uvula*), and tends to cause suffocation (πνίγει).⁴⁰

The similarity with *Diseases II* has been pointed out,⁴¹ but there are two parallel descriptions of *uvula* in this book, one with a semiology, a humoral etiology and a prognostic (I quote only the beginning: “Staphylitis occurs when phlegm descends out of the head”⁴²), and the other with a semiology, with therapeutics and a prognostic, but without any humoral etiology involving phlegm:

If staphylitis arises in the throat, the extremity of the uvula fills up with fluid, (ἐμπίμπλαται ἄκρος ὁ γαργαρεὼν ὕδατος), becomes spherical and translucent, and stops the breath. If the jaws swell up (φλεγμαίνη) on both sides, the patient suffocates (ἀποπνίγεται).⁴³

³⁶ As is acknowledged by Thivel (1965) 268 although he tries to trace it back from Aristotle (and from the *Anonymus Londinensis*) in the Hippocratic corpus.

³⁷ *HA* 3.19, 521 a 8.

³⁸ *Parts of Animals (PA)* 650 b 2, transl. A.L. Peck, Loeb, 1937.

³⁹ Van der Eijk (1990) 52–53.

⁴⁰ *HA* 1.11, 493 a 3–4.

⁴¹ E.g. Louis (1964) XXXIX, Byl (1980) 43.

⁴² *Diseases II (Morb. II)* 10 (p. 140 Jouanna; 7.16 L.), transl. Paul Potter, Loeb, 1988.

⁴³ *Morb. II* 29 (p. 164 Jouanna; 7.46 L.).

Jacques Jouanna, in his seminal studies of these texts and, with less confidence, in his edition, thinks that the first version is the later, because it shows “un développement et une systématisation d’une théorie humorale seulement implicite à l’époque antérieure”, i.e., in the second version.⁴⁴ It may be stressed that Aristotle chooses a version of *wula* that is quite similar to the version that appears in the second part of *Diseases II*, where no explicit humoral explanation is presented.

The second text is concerned with gall, which Aristotle describes in great detail, due to the fact that there is a part in the body, the gall-bladder, which is also called “gall” (χολή) in Greek. Not every animal has a χολή (“gall-bladder”):

Sometimes, in the same group, there are some animals which look as if they have one, and some as if they have none: this is true of the mice, and also of the human species, as in some individuals the gall-bladder is placed against the liver and is obvious, while in some it is missing.⁴⁵

This observation explains why bile cannot fulfill any necessary function⁴⁶ in the human body, and may also explain the criticism made by Aristotle soon after of Anaxagoras’ explanation of acute diseases by the “gall” or “gall-bladder”:

They say that when it gets too full, it spurts its liquid out into the lung and blood-vessels’ sides (ὑπερβάλλουσιν γὰρ ἀπορραίνειν)⁴⁷ [. . .]. This must be wrong, because nearly everyone who suffers from these affections has no gall-bladder, and this would be proved if they were dissected. Besides, there is no comparison between the amount of bile which is present in the ailments and that which is emitted from the gall-bladder (τὸ πλῆθος τὸ τ’ ἐν τοῖς ἀρρωστήμασιν ὑπάρχον καὶ τὸ ἀπορραϊνόμενον ἀσύμβλητον). No; it seems probable that, just as bile elsewhere in the body is a residue or colliquescence, so this bile around the liver is a residue and serves no purpose.⁴⁸

⁴⁴ (1983) 49–50.

⁴⁵ *PA* 676 b 29–33.

⁴⁶ About bile and causality, cf. Pellegrin (1990) 206: “dans certains cas, la nature, en violation d’un des principes les plus souvent répétés par Aristote lui-même, agit sans but. (...) Un organe finalisé, le foie, étant donné, le fonctionnement de sa propre nature produit un phénomène, la bile, qui tombe en dehors de toute finalité.”

⁴⁷ These verbs could be used also for the gall itself.

⁴⁸ 677 a 14.

Note that Aristotle will say afterwards that the absence of gall (or gall-bladder) helps horses or stags to stay healthy:⁴⁹ it seems that the idea of bile as a cause of diseases cannot be so easily dismissed. Furthermore, why does Aristotle argue here against Anaxagoras, and not against the physicians who describe flows of gall as responsible for acute diseases?⁵⁰ Again, he does not want to interfere in medicine: even when, for once, he speaks about acute diseases (after all, his father was a physician), he can only afford to debate philosophically with Anaxagoras about the parts of the body.

We have gone from the interaction between humoral medicine and philosophy in the account of Protagorean relativism, to an analysis of the distance between laymen and physicians when it is a question of specific knowledge about the humours, and then, finally, to the systematisation of that distance in Plato and Aristotle. In the well known beginning of *Metaphysics A*, Aristotle explains that medicine is a *technê* inasmuch as it is able to cure “all persons of a certain type, considered as a class, who suffer from this or that disease (e.g. the phlegmatic or bilious or suffering from burning fever οἷον τοῖς φλεγματώδεσιν ἢ χολώδεσιν ἢ πυρέττουσι καύσῳ).”⁵¹ Like Plato, Aristotle is perfectly aware of the humoral explanations of diseases which he leaves aside or refutes in the two texts I have just read, and he is also aware of their links to a specific constitution. But the philosopher as such, i.e., as a researcher in the theoretical sciences, does not have the same objects of investigation as the researchers in the “productive” or applied sciences, such as physicians interested in producing health.⁵² Medicine, in the Hippocratic Corpus, as Jacques Jouanna has said in his *Hippocrates*, “began to assert its autonomy in relation to philosophy,”⁵³ but it is also true that philosophers, in the face of medicine, insist on their specificity, and on the limits of medicine.

⁴⁹ 677 a 29–b 10 (with χυμὸν, b 10).

⁵⁰ E.g. *Regimen of Acute diseases (RMA)* 42 (p. 54 Joly; 2.312–314 L.).

⁵¹ *Met.* 1, 981 a 7–12, transl. H. Tredennick (modified), Loeb, 1933: ἢ del. Jackson, but see *Insomn.* 461 a 22–23 (οἷον τοῖς μελαγχολικοῖς καὶ πυρέττουσι καὶ οἰνωμένοις), about which cf. van der Eijk (1990) 42.

⁵² *Eudemian Ethics*, 1216 b 18. Cf. Flashar (1962) 318, Pellegrin (1982) 164 n. 29, with the restrictions of van der Eijk (1990) 54 n. 58: stressing the “beschränkte Interesse” of Aristotle for medicine, he notes that in other works, which have not been preserved, as in his *Ἰατρικά* [D.L. 5 25], he may have gone into greater detail.

⁵³ Jouanna (1999) 259 = (1992) 366.

In the ethical theory which Aristotle constructs, there is a difficulty which may be related to this complex relationship between medicine and philosophy. What is the interaction between nature and *ethos*? “Presumably, all nature is concerned with matter.”⁵⁴ And it is well known that “clearly the affections of the soul are formulae expressed in matter” or “enmattered accounts” or “forms embedded in matter” (λόγοι ἐνυλολοί).⁵⁵ This is the case for fear, anger and so on. Hence *ethos* is one of the points which should be scrutinized in order to study the differences between animals.⁵⁶ Let us first pose the question at a general level. There are physiognomic observations in Aristotle, which trace the relationship between non-uniform parts of the body, such as the nose, the forehead, the eyes, or the heart, and a given character. Such a character is mainly specific to a class of animals, but it may also serve to distinguish some types and even some individuals in the class.⁵⁷ Uniform parts of the body, such as humours, and of course, blood, may also contribute to the understanding of character. An earthy blood predisposes bulls and boars to anger. Conversely, the lighter the blood, the more intelligent the animal. This is true to such an extent that some bloodless animals, such as bees or ants, are more intelligent than some animals with blood.⁵⁸ A necessary link, by means of the material (or material-efficient) cause,⁵⁹ between humour and character should preclude any effect of education on character, and *a fortiori*, on the cultivation of virtue. Are humans really different from other living beings in this respect? The argument is that, in the human soul alone, the desiring part can be made to follow the wise decisions of the rational part, thereby enabling, little by little, the creation of a virtuous character.⁶⁰ But the matter is perhaps not so simple, even in Aristotle’s authentic texts.

⁵⁴ *Met.* α.3, 995 a 17. Cf. Kullmann (1997) 51, 59.

⁵⁵ *On the Soul* 1.1, 403 a 25, transl. W.S. Hett, Loeb, 1957, Everson (1995) 186 (1997) 264–265, van der Eijk (1997) 232.

⁵⁶ *HA* 1.1, 487 a 10 sq.

⁵⁷ Cf. for example *HA* 1.8, 491 b 12–14, b 25, *PA* 667 a 11–15, Byl (1980) 264–268, van der Eijk (1997) 248–249, 252–253. See also, about cowardice or bestiality “constituted by nature” and/or by disease, *EN* 7.5, 1149 a 5–13.

⁵⁸ *PA* 650 b 22–24, cf. van der Eijk (1997) 248–249.

⁵⁹ “Aristotle is often prepared to condense his doctrine that there are four causes in the doctrine that there are two types of causes, material-efficient causes on the one hand, and formal-final causes on the other. See *PA* 1.1, 642a14; *Physics* 2.9, 200 a 32” (Bolton (1997) 99); cf. Pellegrin (1990) 210–211.

⁶⁰ Cf. e.g. Demont (1998) 83–84.

Let us indeed specify our general question. What about the possibility of a virtuous life when one is bilious? To be bilious, that is, to suffer from bile (χολᾶν) is to be foolish, a meaning assumed by μελαγχολικός and related words in Aristophanes and Plato, as a number of scholars have shown.⁶¹ Standard Greek evidently stresses the link between bile and character. And what about virtue when one is a man in whom black bile is the dominant humour? Such types are acknowledged several times in works indisputably attributed to Aristotle, although black bile is for him only a residue, and a one mentioned only rarely, in his biological works. Philip van der Eijk has shown that Aristotle, directly or indirectly, not only speaks of “the melancholic” as in standard Greek, but also stresses the influence of “black bile” in his *Parva naturalia*, so that “a physiological theory is evidently supposed.” He has also shown that Aristotle’s analysis of impetuous intemperance (προπετής ἀκρασία) in the seventh book of the *Nicomachean Ethics* is consistent with this theory:

It is the quick and the *melankholikoi* who are more liable to the impetuous form of unrestraint, because the former are too hasty and the latter too vehement to wait for reason, being prone to follow their imagination.⁶²

There is evidently a physical obstacle here to moral choice and, indeed, to morality. Aristotle goes on to say that intemperance in general, contrary to disorder, “can be cured” (ιατός).⁶³ This use of “to cure” should be noted: Aristotle compares disorderly men with the hydropic and the phthisic (these diseases are permanent), and the intemperate with the epileptic (epilepsy is a chronic disease). These comparisons between ethical troubles and diseases make it clear that the use of the verb “to cure” with respect to intemperance, and, therefore, with respect to melancholic people, is a metaphoric usage.⁶⁴

⁶¹ Especially H. Flashar (1966) 37–39, leading to the hypothesis “daß die ‘Melancholie’ zunächst einmal von der Galle abgeleitet wurde und erst nachträglich in systematisierender Theorie die ‘schwarze Galle’ hinzutrat.”

⁶² *EN* 7.7, 1150 b 25–28, transl. H. Rackham, Loeb, 1926; cf. van der Eijk (1990) 36–46, esp. about the mention of ὑγρότης in *On Memory*, 453 a 14 sqq., and of black bile in *On Sleep*, 457 a 31–33, with full discussion of the sometimes controversial material, and 46–51 about *Nicomachean Ethics*.

⁶³ 1150 b 29–32. About the “puzzles surrounding the ethical discussion of moral weakness”, see Hutchinson (1995) 214–217 and 369–370. The humoral side of the problem is mainly disregarded.

⁶⁴ Jaeger (1957) 59 does not consider these texts.

Further on, Aristotle uses a similar medical phrase, this time expressly about the melancholic, when he says that their intemperance is “easier to cure” (εὐιατοτέρα)⁶⁵ than the intemperance of the weak, who fail to follow their choices through. So the melancholics are the easiest “to cure” from two points of view, as intemperate vs disorderly men, and as impetuous intemperate vs slow and weak intemperate. But he does not say what the “cure” should be, because there is no real medical side of the problem here, only an ethical one.⁶⁶ In the opposition between the weak intemperate and the impetuous (i.e. melancholic), the problem of weakness is that it forbids stability in choices. The problem of vehemence is that it forbids rational choice itself.⁶⁷ The latter seems to Aristotle easier to cure than the former, perhaps because it seems easier to wait until an impetuous man is able to make a rational choice, than to fix a weather vane.

There is another difficulty in Aristotle’s conclusion about intemperance. This conclusion is connected with the remarks which we have just read in such a way as to suggest that it concerns melancholy alone. Aristotle introduces a new opposition between nature and habit:⁶⁸

(...) and these who have become unrestrained through habit are more easily cured than those who are unrestrained by nature, since habit is easier to change than nature; for even habit is hard to change, precisely because it is a sort of nature.⁶⁹

It seems that Aristotle does not say here that the melancholics are such because of their usual behaviour: this would be the reverse of what he said earlier about the physiology of melancholy. It is rather a new point of view about the whole subject, introducing the con-

⁶⁵ 7.10, 1152 a 28.

⁶⁶ “The explanation how the ignorance (which caused the weak person’s action) is dissipated (...) is the same as concerning a drunk or a sleeping person (...): it is to be obtained from the physiologists” (*EN* 7.3, 1147 b 6–9), in: van der Eijk (1997) 244, who quotes the summary by Tracy (1969) 276 of the “scattered remarks in Aristotle’s physical works” about this problem, adds some examples and concludes: “How exactly these processes interact and influence cognitive processes, Aristotle does not make very clear.” See also Emerson (1995) 188–191. Anyway, the intemperance due to illness or bestiality is *κατὰ πρόσθεσιν*, and is not the real object of Aristotle’s *Ethics* (*EN* 7.5, 1149 a 16–20): but what about the melancholic?

⁶⁷ 7.10, 1152 a 18.

⁶⁸ Which perhaps comes from Plato’s *Republic* about the Tyrant “who is given to drink, sex and insanity (μελαγχολικός) by his nature, by his behaviour or by the two” (573 c 7–9), as is suggested by van der Eijk (1990) 48 n. 41.

⁶⁹ L. 29–31.

clusion about intemperance in general: as the impetuous intemperate are easier to cure than the weak, so the intemperate by behaviour are easier to cure than those whose intemperance is determined by nature. This brings us back to the main purpose of the book, the study of behaviour, of *ethos*, from a rather optimistic point of view. But as the melancholics are in such a state largely through the influence of nature, this also suggests that, although being the easiest to cure, their cure is still far from being simple. It seems that Aristotle is nearly ready to acknowledge, on the one hand, the limits of ethical theory, and, on the other hand, the necessity, but also the uncertainties of humoral medicine.⁷⁰

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⁷⁰ Nussbaum (1994) does not seem to take into account the question of the humoral sources of emotions. Robinson (1977) 91 strongly disapproves of the implications of what he calls "the medical metaphor": "Nor must we use the medical metaphor, as Aristotle too often does, and regard these men as patients to be cured, and even to be cured against their will."

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THE WAY TO WISDOM IN PLATO'S *PHAEDRUS* AND IN THE HIPPOCRATIC CORPUS*

Elsa García Novo

Summary

In the Platonic Phaedrus, Socrates leads his friend to truth and knowledge. This path has, in my opinion, three steps. To perceive through the senses (aisthanesthai), to remember past experiences (anamimnêskesthai) and to know (noein, i.e. to perceive the truth through the mind, 'pilot of the soul'). In the Hippocratic Corpus we can find a parallel way to discover truth. The physician keenly perceives through the senses. He remembers past experiences (other patients). From many cases, he gets to know the course and the nature of disease. He reaches the truth as far as it is possible to mortal men.

INTRODUCTION

In the Platonic *Phaedrus*, Socrates leads his friend to truth and knowledge as opposed to fallacy, the latter being represented in the dialogue by Lysias' speech, a sample of sophistic reasoning.

In a very clever way, Plato travels to the core of men. It is not an easy lane; people who cannot grasp anything but facts will see throughout the dialogue just two individuals speaking of love, rhetoric and beauty, and will hear a once-upon-a-time tale. As for people who are sufficiently mindful: those the author will lead from rhetoric to wisdom, from love to philosophy, from beauty to truth.

Surely Plato does not state the actual message. He lets the readers learn it if they are able to. He makes the audience go round and round,¹ like the soul above the heavens, so that by picking, now and then, a bit of knowledge, they can finally tell the difference between fallacy and truth, between the ability to persuade and wisdom.

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¹ The repetition of *peri-* in Plato's *Phaedrus* 247 c 1–248 c 5 is remarkable.

In fact they will no longer ask,² because they will abide by the truth.

Even Phaedrus, who is presented to us as a nobody,³ as the first sentence of the dialogue shows (227 a 1), is wisely led by Socrates from the position of an uninterested person who does not understand to that of a man asking for the right virtues together with Socrates (279 b 8–c 7) at the end of the piece.⁴

In my opinion, Plato constructs this path to knowledge in three steps that he does not put forward explicitly.⁵

PLATO'S *PHAEDRUS*: STEP 1

To perceive through the senses (aisthanesthai). The *mise en scène*, with the natural description of the *locus amoenus* where Socrates and his friend stop to speak, is a way to make Phaedrus keenly perceptive. Seeing the beauty of the place, hearing the cicadas, smelling the freshness of the trees, touching the grass and the rivulet, feeling at midday the heat and the coolness of the water, lying in a comfortable position: those are the sensations highlighted by Socrates (*Phdr.* 228 e 4–230 e 5). He insists on being alert, fully conscious (258 e 6–259 d 8). In this way the philosopher makes us understand that the right use of the senses is a necessary first level on our way to learning.⁶ Such is, in my opinion, the role of the pleasant place next to the river, usually understood, from W.H. Thompson to Ernst Heitsch, as a pretty description of an actual landscape,⁷ which arouses Socrates' enthusiasm.⁸

² Cf. de Saint-Exupéry (1948).

³ Cf. García Novo (forthcoming).

⁴ Cf. Hackforth (1952) 13 and Capelletti (2000) 260.

⁵ For an opposite view to the Tübingen school, considering that this dialogue is not a key to the understanding of the whole Platonic position, see now Kühn (2000).

⁶ For the epistemological debate between the validity of perception and knowledge, cf. Lloyd (1979) 129–138. For sense-perception as distinct from knowledge in Plato, see Plato's *Theaetetus*, and cf. Cornford (1935) 29–109 and Crombie (1963) 1–32. Aristotle did not consider any of the senses to be Wisdom. 'Again, we do not regard any of the senses as wisdom (*sophian*); yet surely these give the most authoritative knowledge (*gnôseis*) of particulars. But they do not tell us the 'why' of anything—e.g. why fire is hot; they only say that it is hot': *Metaphysics* (henceforth *Met.*) 981 b 9–13. Trans. Ross (1926 = 1984) 1553.

⁷ The commentaries on this dialogue take the description of the place as simply a real description and make an estimation of the distance to Athens, the kind of tree, etc., but they do not underline the importance given by Socrates to the use of the senses. Cf. among many others Thompson (1868) 9–11, Robin (1933) ix–xii, Brisson (2000) 30–32, and 197–198, nn. 48–53, and Heitsch (1997²) 72 and n. 83, with bibliography.

⁸ Cf. Hackforth (1952) 14 and Friedländer (1969b) 220.

PLATO'S *PHAEDRUS*: STEP 2

To remember past experiences (anamimnêskesthai). We are told by Socrates that, once in the physical world, the soul preserves its past experiences—the vision of beauty, i.e. truth, above the heavens, when the soul accompanied a god (*Phdr.* 249 c 1–250 c 6)—by means of *remembrance*. In fact some gifted people have, in my opinion, an innate vision of beauty or truth. The moment such people perceive a beautiful object or grasp a piece of truth, they relate it to their own notion of what is true.

For ordinary people, the past experiences conform to a background that allows them to associate new sensations with older ones. Memory, as distinct from remembrance, plays a role here. Aristotle, at the beginning of the *Metaphysics*, relates perception, experience, and memory: 'And from memory experience is produced in men; for many memories of the same thing produce finally the capacity for a single experience.'⁹

PLATO'S *PHAEDRUS*: STEP 3

*The third level is to know (noein), i.e. to perceive the truth through the mind, 'pilot of the soul' (Phdr. 247 c 2–247 c 6).*¹⁰

People are able to remember single experiences, but only some of them would conceive, in their mind, truth. Those would analyse an object, a notion or a soul into its parts, and, once they grasped its nature and its function, they would recompose the whole, thus reaching a synthesis: As Plato puts it, '(to) bring a dispersed plurality under a single form, seeing it all together . . .'¹¹ (265 d 3–5), and again, '(to) divide into forms, following their natural articulation . . .'¹² (265 e 1–2).

⁹ *Met.* 980 b 28–981 a 1 (trans. Ross 1926 (= 1984) 1554).

¹⁰ *Alêtheia* or *alêthês* appear some fifty two times in this dialogue (*TLG*). Especially interesting is the passage where the place above heavens (*hyperouranion topon*) is related with truth itself (*Phdr.* 247 c 3–d 1): 'Of that place beyond the heavens none of our earthly poets has yet sung, and none shall sing worthily. But this is the manner of it, for assuredly we must be bold to speak what is true, above all when our discourse is upon truth.' (trans. Hackforth (1952) 78). For a discussion of the meaning of *alêtheia* in Plato see Friedländer (1969a) 221–229.

¹¹ εἰς μίαν τε ἰδέαν συνορῶντα ἄγειν τὰ πολλαχῇ διεσπαρμένα, ἵνα ἕκαστον ὀριζόμενος δῆλον ποιῇ περὶ οὗ ἂν αἰεὶ διδάσκειν ἐθέλῃ. (For translation see Hackforth (1952) 132.)

¹² τὸ πάλιν κατ' εἴδη δύνασθαι διατέμνειν κατ' ἄρθρα ἢ πέφυκεν (For translation

‘Now I am myself, Phaedrus, a lover of these divisions and collections (*diaireseôn kai sunagôgôn*),¹³ so that I may be able both to speak and to think’, says Socrates, ‘and if I think anyone else has the natural capacity to look to one and to many, I pursue him “in his footsteps as if he were a god”’ (266 b 3–7).¹⁴

From plurality, the mind reaches a single notion; from many representations of the true, it picks out a single truth (beauty itself, 249 b 6–249 c 1). On the other hand, from individual cases it arrives at generalisation. Thus people who reach this third step achieve knowledge and wisdom.

HIPPOCRATIC CORPUS: STEP 1

In the Hippocratic Corpus we can find a parallel way to discover truth.

The physician keenly perceives through the senses. We read everywhere that he has to look, to hear, to touch, to smell, even to taste; to perceive the heat, cold, humidity and dryness: such a perception is the primary information that a Hippocratic physician gets from the patient (*Ancient Medicine*, chapter 9).¹⁵

He has to be aware: ‘... I recommend ... to pay attention (*prosechein ton noun*) to the whole of the medical art’, is the advice of the author of *Regimen in Acute Diseases*.¹⁶

The signs of disease have to be thoroughly examined, as we are told in *Prognosis* and *Prorrhetic* 2,¹⁷ because the physician cannot but

see Hackforth (1952) 133). For the syntax and conjectures to the passage see de Vries (1969) 215–216.

¹³ On collection and division in this context see Guthrie (1975) 427–431.

¹⁴ Trans. Rowe (2000) 103.

¹⁵ *De vetere medicina* 9 (1.588,14–590,1 L = I p. 9.17–20 Kühlewein = pp. 41.10–42.10 Heiberg = I pp. 26.1–28.40 Jones = pp. 127.15–129.13 Jouanna).

¹⁶ ἐμοὶ δ’ ἀνδάνει μὲν [ἐν] πάσῃ τῇ τέχνῃ προσέχειν τὸν νοῦν (ἐν del. Kühlewein); *De diaeta in morbis acutis* 2.230.1–2 L. = I 110, 14–15 Kühlewein (ch. 4) = II p. 64.1–2 Jones (ch. 4) = VI 2, p. 37.11–12 Joly (ch. 4).

¹⁷ Cf. *Prognosticon* (henceforth *Prog.*) ch. 2 (2.116.2–3 L. = I p. 80.8–9 Kühlewein = II p. 10.25 Jones = p. 195.11 Alexanderson); ch. 9 (2.132,14–15 L. = I p. 87.5 Kühlewein = II p. 20.12–13 Jones = p. 205.3 Alexanderson); *Prorrheticon* 2.1 (9.8,2–6 L. = p. 2.12–18 Mondrain (1984) = VIII p. 220.7–10 Potter (ch. 2); ch. 2 (9.10,4–5 L. = p. 4.4–5 Mondrain = VIII p. 222.11–12 Potter); ch. 3 (9.10,23–24 L. = p. 5.8 Mondrain = VIII p. 224.7–8 Potter; etc.).

rely on his own senses, as opposed to modern physicians trapped in the results provided by their 'perfect' machines, whose results are based upon statistical data gathered by countless generations of machines. Many a time the present-day physician has lost not only the possibility of learning through their senses but also the need of diagnosing by means of deducing the truth, since it is 'packaged' in the instruction book along with the machine.

HIPPOCRATIC CORPUS: STEP 2

He remembers past experiences: other cases, other patients, other sensations, which he has experienced by himself or he has learned by listening to his master or his colleagues, or by reading their treatises (cf. *Prorrhetic* 2, chapter 4).¹⁸ He writes down new cases, as in the *Epidemics*, to be used as a memorandum.¹⁹

HIPPOCRATIC CORPUS: STEP 3

There are practitioners who would not reach the third level. In *The Art*, chapter 9, we read: 'Without doubt no man who sees only with his eyes can know anything of what has been here described.'²⁰ As Socrates says, it is necessary to know the nature of the matter we are searching on,²¹ but experience (*empeiria*) and habit (*tribê*) are not enough (*Phdr.* 270 b 5–6). Something else is necessary, to 'apply one's mind to' (*prosechein ton noon*).²²

At the Erlangen Hippocrates Colloquium I presented some linguistic ways that reflect the method of analysis or synthesis in the

¹⁸ *Prorrh.* 2.4 (9.20, 12–13 L = p. 13.2–4 Mondrain = 234.18–20 Potter).

¹⁹ See K. Deichgräber (1971) and V. Langholf (1990).

²⁰ *De arte* 11 (6.18, 14–15 L = p. 16.11–12 Heiberg = II p. 208.1–2 Jones = V 1 p. 237.4–5 Jouanna). Trans. Jones.

²¹ "As Hippocrates and the true reasoning teach us to do"—says Socrates (Pl. *Phdr.* 270 c 9–10)—a precise analysis would let us know "which capacity (*dunamis*) has, by nature, each part to act or to be a passive receptor, and which is the object of its action or the object which will act on it." (270 d 4–5) Such method will lead us to a posterior synthesis that is needed even to think (266 b 5).

²² This expression appears some eight times in the *CH*. Cf. *Index Hippocraticus s.v.* προσέχω.

Presocratics, the Hippocratic Corpus and Plato.²³ Through analysis, the expert Hippocratic physician gets to know the function and nature of every part of the body; through synthesis, he considers the body as a whole, reaching the so-called holistic approach to medicine, dramatically needed nowadays, when specialisation has broken men down to pieces. Collecting many cases and considering their likenesses, the Hippocratic physician gets to know the nature and the course of one disease.

I am not introducing here the subject of the Hippocratic method advocated by Socrates in the *Phaedrus*,²⁴ a topic which has provoked different reactions.²⁵ The relevant likeness of the Hippocratic and the Platonic path to wisdom does not depend on a sentence: it is rather a common way of thinking, which works at the same time with the One and the Many, with the human body and its parts, with individuals and generalisations. Heinrich von Staden²⁶ and myself²⁷ have separately presented papers at the Hippocrates Colloquium in Nice about the importance of both individuality and generalisation in the Hippocratic Corpus.

The Hippocratic doctor builds a bridge between pathology (patients) and nosology (diseases). This way he can tell the symptoms of such and such a disease and of such and such a patient, as well as the signs of recovery or death (cf. *Prognostic* chapter 1 and *Prorrhetic* 2, chapters 1–2).²⁸

He reaches the truth as far as it is possible for mortal men (cf. *Phdr.* 278 d 2–6; *Prorrh.* 2.3;²⁹ and *Ancient Medicine* 12),³⁰ i.e. ‘wrapped in doubt and in a human way’, as we read in the *Prorrhetic* II.³¹

²³ See García Novo (1996).

²⁴ *Phdr.* 270 c 6–d 7; cf. n. 21.

²⁵ See details and bibliography in Jouanna (1990) 77–81. Cf. now Vegetti (1995) 102–122.

²⁶ See von Staden (2002).

²⁷ Cf. García Novo (2002).

²⁸ Cf. *Prog.* 1 (2.112,7–11 L = Kühlewein I p. 79.4–8 = II p. 8.23–27 Jones = p. 194.6–9 Alexanderson); *Prorrh.* 2.1 (9.8,2–5 L = p. 2.12–16 Mondrain = VIII p. 220.7–11 Potter (ch. 2); ch. 2 (9.10,6–7 L = p. 4.5–7 Mondrain = VIII p. 222.13–14 Potter).

²⁹ See n. 31 for the text.

³⁰ *IM* 12 (1.596,1–598,2 L = I pp. 12.22–13.11 Kühlewein = pp. 43.23–44.7 Heiberg = I p. 32.1–16 Jones = pp. 132.10–133.6 Jouanna).

³¹ δοκέω δὲ αὐτῶν εἶ τι ἀληθὲς λέγεται . . . πρῶτον μὲν τῶν σημείων ὧν λέγω τεκμήρασθαι τοῦτο γνόντα, ἔπειτα ἐνδοιαστῶς τε καὶ ἀνθρωπίνως προειπεῖν . . . (*Prorrh.* 2.3 = 9.10,21–25 L = p. 5.6–9 Mondrain = VIII p. 224.5–9 Potter.)

'Perfectly exact truth is but rarely to be seen', writes the author of *Ancient Medicine* referring to doctors (ch. 9).³²

CONCLUSION

This path to wisdom is not a question of mutual influence, but an expression of the way of thinking of wise Greek men.

They have taught us how research has to be done. We have to observe the facts keenly, to remember the learned or experienced realities, to conjecture the conclusions going from generalisation to single objects, dividing and composing: our way to aim at the truth.

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³² *VM* 9: τὸ δὲ ἀτρεκέες ὀλιγάκις ἐστὶ κατιδεῖν (δ' ἀκριβὲς M, Littré) (1.590,3–4 L = I pp. 9.23–10.1 Kühlewein = p. 41.24 Heiberg = I p. 26.21–22 Jones = 128, 16–17 Jouanna).

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MEDICI CONTEMPORANEI A IPPOCRATE:
PROBLEMI DI IDENTIFICAZIONE
DEI MEDICI DI NOME ERODICO

Daniela Manetti

Summary

In order to redirect the research into the physicians in Hippocrates' times, I have undertaken a complete review of all the sources about the physicians named Herodicus. The Anonymus Londiniensis (P. Lond. gr. inv. 137), who is by now the main source of information about the physicians prior or contemporary to Hippocrates, quotes Herodicus of Cnidus, otherwise unknown (IV 40–V 34), and another Herodicus (IX 20–36), who was identified with Herodicus of Selymbria (quoted by Platon) by the first editor H. Diels. The result of the analysis of the tradition shows clearly, I think, that Diels' identification of Herodicus of Selymbria is not based on any serious ground; that a more ancient Herodicus (of Cnidus), prior to Hippocrates and classified as founder of dietetics by a strictly medical tradition, has been confused with and obscured by Herodicus of Selymbria, overwhelmingly famous because of Plato's dialogues; and that in some passages the name Herodicus is an ancient corruption of that of the sophist Prodicus.

La prospettiva storiografica della medicina greca dalla fine dell'antichità è stata condizionata dal gigantismo di un protagonista come Ippocrate il cui ruolo ha messo in ombra il contesto in cui la medicina del VI–V secolo è cresciuta. Al di fuori di lui e dopo i medici semidivini del mito, sono pochi i personaggi di questa storia, alcuni, come Democede di Crotone, noti soprattutto per le loro vicende biografiche più o meno avventurose, altri come Alcmeone, Filolao o Democrito, che si collocano al margine della professione medica, essendo classificati come 'filosofi', altri ancora, noti soprattutto attraverso Galeno o la tarda tradizione biografica (Eurifonte, Polibo, Dessippo ecc.), poco più che puri nomi. È indubbio che la dossografia sulle cause patologiche del cosiddetto Anonimo Londinese (P.Lond.

inv. 137),¹ pubblicata nel 1893, ha ampliato molto la prospettiva rivelando una quantità di nomi di medici che hanno operato presumibilmente prima della fine del quarto secolo a.C., alcuni prima di Ippocrate, altri più o meno contemporaneamente a lui: l'Anonimo espone sinteticamente le teorie eziologiche di ciascuno, permettendoci in qualche caso di attaccare un contenuto di idee ad un nome già noto, in qualche altro fornendo nomi del tutto nuovi con almeno una scarsa notizia sul loro pensiero.

La dossografia dell'Anonimo venne alla luce quando la storiografia dell'antica medicina considerava quasi come un dogma la divisione della medicina greca del quinto secolo in due scuole, di Cos e di Cnido, e questa impostazione ebbe un forte riverbero sull'interpretazione del testo e del ruolo dei singoli personaggi.² Oggi, dopo la crisi della dottrina delle due scuole rivali, la ricerca ha bisogno di essere reimpostata, ma non è questa l'occasione per farlo in modo sistematico. Si possono fare tuttavia alcune precisazioni almeno su alcuni personaggi.

Nella dossografia dell'Anonimo Londinese (P.Lond. inv. 137) sono citati due medici di nome Erodico. Il primo, Erodico di Cnido, è citato all'inizio, subito dopo Eurifonte di Cnido (IV 40–V 34): è un personaggio nuovo di cui non sapevamo prima assolutamente nulla. Egli, a parte l'ovvia comune cittadinanza, è strettamente connesso alla figura di Eurifonte, alla cui dottrina viene sistematicamente avvicinato per confronto. Condivide con lui la posizione generale sulle cause di malattie (i *perittômata* o 'residui'), ma se ne differenzia per la spiegazione dettagliata del processo patologico. Egli infatti abbandona la nozione di 'purificazione' del ventre per affidare la genesi delle malattie ad uno squilibrio fra cibo e attività fisica. Quando il cibo è in eccesso rispetto all'attività fisica rimane non elaborato nel ventre e produce 'residui', che a loro volta generano un umore acido e uno amaro (ἐκ μέντοι γε τῶν περιχωμάτων ἀποτελεῖσθαι διττὰς ὑγρότητας, μίαν μὲν ὀξεῖαν, τὴν δὲ ἑτέραν πικράν). Questi sono specificamente gli umori morbifici e, a seconda della prevalenza dell'uno o dell'altro o della loro differente localizzazione, si formano malattie diverse. Subito dopo Erodico è esposta la dottrina di Ippocrate, che dunque viene considerato a lui posteriore.

¹ Il testo è edito da Diels (1893a).

² Cf. p. es. Fredrich (1899) 33–50.

Un secondo medico di nome Erodico è citato più avanti a col. IX 20–36, in un punto purtroppo lacunoso. Come è noto, Diels ha ricostruito l'identità di quest'ultimo come quella di Erodico di Selimbria,³ un esperto di ginnastica divenuto medico, noto soprattutto attraverso le allusioni ironiche che gli dedica in più dialoghi Platone. Ma vale la pena di riprodurre ciò che è realmente leggibile nel papiro relegando in apparato gli interventi di Diels e altri.

- 20 Ἡρόδικος δὲ [
τὰς νόσους [
την δὲ (εἶναι) κατ[
καὶ ἄλγηδος αἵ(τια)[
ἔχη ἢ τροφή ηπ.[
25 τὰ σώματα οτ[
φύσιν οἶεται.(.)τη[
φύσιν ἐχόντ(ων) τ(ῶν) σω[μάτ(ων)
νόσον π[α]ρὰ φύσιν
παρὰ φύσιν διατεθ[
30 ἡ ἰατρικὴ παραγομέ[νη
φύσιν ἄγει ταῦτα ω[
δὲ τὸν ἄνδρα τὴν ἰατρικὴν
ἀγωγὴν εἰς τὸ κατὰ φύσιν [
οὕτως. κείνο δὲ οὔτ[
35 θερμότητος καὶ ὑπ[
συνίστανται νόσοι [
20 δὲ [ὁ κηλυμβριανὸς οἶεται] D. 21 τὰς νόσους [γί(νεσθαι) ἀπὸ τῆς
διαίτης· ταύ-] D. 22 την δὲ (εἶναι) κατ[ὰ φύσιν, ὅταν πόνοι προσῶσιν] D.
23 ἀλγηδ(όν)ος αἵ(τια)[legi et intellegi dub., ἄλγη δ' ὅσα [δεῖ, καὶ οὕτως
πέψιν μὲν] D. 24 ηπ[P, ut videtur: ἐπί[δοσιν δὲ ἀεὶ λαμβάνη] D. 25
τὰ σώματα οτ[P, ut videtur: τὰ σώματα ἀγ[αδιδομ(έν)ης τῆς τροφῆς κατὰ]
D. 26 φύσιν οἶεται.(.)τη[P: φύσιν. οἶεται γ(ὰρ) τῇ[ν μ(έν) ὑγίειαν γί(νεσθαι)
κατὰ] D. 27 φύσιν ἐχόντ(ων) τ(ῶν) σω[μάτ(ων): φύσιν ἐχόντ(ων) τ(ῶν)
σω[μάτ(ων) περὶ τὴν δίαιταν, τὴν δὲ] D. 28 νόσον π[α]ρὰ φύσιν ἐχόντ(ων)
αὐτ(ῶν). τοῖς μ(έν)τοι] D. 29 διατεθ[ut videtur P: παρὰ φύσιν διατ-
εθεῖ[σιν πονεῖν π(ρο)σ(τά)σσει] D. 30 ἡ ἰατρικὴ παραγομέ[νη καὶ ο(ὕ)τως
εἰς τὸ κατὰ] D. 31 φύσιν ἄγει ταῦτα, ὥ[ς αὐτός φ(ησιν). sp. λέγουσιν] D.

³ Diels (1893b) 406–34; su Erodico di Selimbria in particolare, 422.

post ταῦτα spatium vacuum 32 δὲ τὸν ἄνδρα τὴν ἰα[τρικὴν ἔντεχνον] D. 33 ἀγωγὴν εἰς τὸ κ(ατὰ) φύσιν [καλέσαι. sp. καὶ ταῦτα μ(έν)] D. 34 οὕτως. κείνο δὲ οὔ[P: οὕτως. [ἐ]κείνο δὲ ὅτ[ι ἀπ' ἐναντί(ων) τῆς τε] D. 35 θερμότητος καὶ ὑπ[P: θερμότητος καὶ ὑ[γρότητος τ(ὸν) σωματ(ων)] D. 36 συνίστανται νόσοι, [διατεθρύληται. sp.] D.

La situazione del secondo Erodico (col. IX), per quanto dichiarata fin dall'inizio da Diels come “unsicher”, viste le ampie dimensioni delle lacune del papiro, si è comunque cristallizzata in una *communis opinio*, basata sull'accettazione *in toto* delle integrazioni di Diels, le quali a loro volta erano partite dall'assimilazione del testo dell'Anonimo alle notizie di Platone.⁴ Ma anche la valutazione di Erodico di Cnido, il primo citato dall'Anonimo (il cui testo non soffre di lacune rilevanti), deve essere sottoposta a revisione, in quanto le notizie su medici di nome Erodico si intrecciano in modo quasi inestricabile. In questa occasione mi propongo appunto di fare una analisi della situazione delle fonti letterarie sui medici di nome Erodico, per cercare di delineare i possibili percorsi di tradizione delle notizie a loro relative.⁵ Da essa si potrà forse trarre qualche conclusione provvisoria sulle possibilità di ricostruzione e interpretazione del testo dell'Anonimo Londinese.

Innanzitutto, i medici di nome Erodico anteriori al IV secolo, di cui siamo a conoscenza, sono *almeno* tre: l'Erodico di Cnido citato dall'Anonimo, Erodico di Megara, poi di Selimbria, ben noto da Platone e Erodico di Lentini, fratello del retore Gorgia, anch'egli citato da Platone *en passant* nel *Gorgia* (448b 4–6). Il secondo Erodico citato dall'Anonimo Londinese a col. IX può essere identificato con uno di questi, ma può anche rappresentare un quarto medico, a noi ignoto da altre fonti, come molti autori che l'Anonimo ci ha restituito nella dossografia cosiddetta ‘aristotelica’. Altre fonti citano medici di nome Erodico, senza attribuire loro un etnico: vedremo di volta in volta quanto e se siamo giustificati ad identificarli con qualcuno di quelli appena citati.

⁴ Caratteristico ragionamento circolare, p. es., nella presentazione del testo di Diels, dato per scontato, in Jori (1993) 159–160: dall'Anonimo si estraiono conferme per la valutazione della testimonianza platonica, dimenticando che la testimonianza dell'Anonimo (o meglio la sua versione secondo Diels) ha per presupposto gli stessi passi di Platone. Ma Jori è solo l'ultimo di una lunga serie.

⁵ Una breve indagine sulla base del CD 7 del Packard Humanities Institute, che contiene papiri documentari e iscrizioni, ha escluso che ci siano testimonianze su personaggi di nome Erodico riferibili alla professione medica.

La citazione più antica di un Erodico è quella in Ippocrate, *Epidemie* VI 3.18 (5.302, 1 L.):

Erodico uccideva i pazienti febbricitanti con passeggiate, molte lotte, bagni di vapore: questo è male. La febbre è nemica delle lotte, delle passeggiate, delle corse, dei massaggi. Ἡρόδικος τοὺς πυρεταίνοντας ἔκτεινε δρόμοις, πάλησι πολλῇσι, πυρίῃσι, κακὸν· τὸ πυρετῶδες πολέμιον πάλησι, περιόδοις, δρόμοιςιν, ἀνατρίψει.

La citazione per nome del bersaglio di una polemica è fatto abbastanza eccezionale, non solo in *Epidemie* ma in tutto il *Corpus Hippocraticum* e dà rilevanza al personaggio.⁶ L'identificazione con Erodico di Selimbria è stata accettata unanimemente dalla critica ed è plausibile, a causa delle indicazioni terapeutiche fornite dal passo ippocratico, relative ad esercizi fisici, che ben si coordinano con le notizie che Platone fornisce a proposito di Erodico di Selimbria (cf. *infra*). D'altra parte Deichgräber⁷ ha cercato di vedere l'influsso di Erodico di Selimbria anche negli aforismi dietetici di *Epidemie* VI, ma la sua teoria è stata contestata con buone ragioni.⁸

Secondo la testimonianza di Platone, Erodico di Selimbria sarebbe colui che ha unito la ginnastica alla medicina, presentandosi come un nuovo tipo di *technites*. In Platone Erodico è una figura che fa certamente parte della 'nuova' medicina,⁹ contro cui egli lancia più volte frecciate¹⁰ ed è forse da connettere ad un contesto più generale di polemica contro l'atletica e le sue invasioni di campo. Il passo più informativo è quello di *Repubblica* 406 a 7:

Perché, se ci rifletti, dissi, prima della nascita di Erodico, gli Asclepiadi, a quanto si dice, non facevano uso dell'educazione delle malattie, di questa moderna terapia. Erodico che era maestro di ginnastica, una volta ammalatosi, tormentò prima e soprattutto se stesso, mescolando la ginnastica alla medicina, e poi in seguito molti altri.

⁶ Manetti-Roselli (1982) 69–70.

⁷ Deichgräber (1971) 50.

⁸ Cf. da ultimo Kollesch (1989a) 191–197.

⁹ Per la questione controversa della datazione, cf. Ducatillon (1977) 153–154; Grensemann (1975) 198 ss., Jori (1993) 158 n. 3.

¹⁰ Contro Grensemann (1975) 198 ss., seguito da Wöhrle (1990) 52 ss.: egli cerca di stabilirne una datazione alta (Erodico di Selimbria più vecchio di Ippocrate), ma mi pare che Platone sia nel *Protagora* (dove egli è ben separato da Icco) sia nella *Repubblica* (dove è contrapposto alla medicina precedente) presenti il personaggio come un contemporaneo di Socrate e Protagora, rappresentante dell'ultima voga in medicina; cf. le osservazioni di Jori (1993) 158–59 n. 3.

E come fece?, disse.

Rendendo la sua morte lunga, gli risposi. In effetti prestando attenzione a una malattia che era mortale e non essendo in grado, penso, di guarirsi, passò la vita a curarsi, non dedicando tempo a nient'altro, tormentandosi per una minima trasgressione del suo regime consueto, giunse alla vecchiaia per la sua sapienza con una lunga agonia.¹¹

Ma ci sono anche due passi del *Fedro* e del *Protagora* che parlano di Erodico:

Phdr. 227 d 4: Mi è venuto però un tale desiderio di ascoltarti che, se tu volessi prolungare la passeggiata fino a Megara e poi, come prescrive Erodico, arrivato sotto le mura tu volessi pure ritornare, io non ti resterei sicuramente indietro.¹²

Prt. 316 e 1: Alcuni, è la mia sensazione, si fecero maestri di ginnastica, come Icco di Taranto e, al nostro tempo ancora, Erodico, oggi cittadino di Selimbria, una volta di Megara, sofista inferiore a nessun altro.¹³

In realtà, che cosa dice veramente Platone su Erodico di Selimbria? Se si sfrondano i testi di tutte le superfetazioni della critica moderna, ne risulta la notizia scarna che Erodico era un maestro di ginnastica noto e di successo (*Protagora*) e aveva utilizzato la propria esperienza di preparatore atletico nel caso di una sua personale malattia; nel far questo aveva mescolato ginnastica e medicina, applicando poi i suoi metodi agli altri, metodi, per altro, descritti (vedi i passi di *Fedro* e *Repubblica*) come violenti, estremi ed esterni al corpo (corse, lunghe passeggiate). Niente suggerisce che egli potesse sostenere teorie

¹¹ Pl. *R.* 406 a 7 οὐκ, εἴ γ' ἐννοεῖς, εἶπον, ὅτι τῇ παιδαγωγικῇ τῶν νοσημάτων ταύτῃ τῇ νῦν ἰατρικῇ πρὸ τοῦ Ἀσκληπιάδαι οὐκ ἐχρῶντο, ὥς φασί, πρὶν Ἡρόδικον γενέσθαι. Ἡρόδικος δὲ παιδοτρίβης ὢν καὶ νοσώδης γενόμενος, μεῖζας γυμναστικὴν ἰατρικὴν ἀπέκναισε πρῶτον μὲν καὶ μάλιστα ἑαυτόν, ἔπειτ' ἄλλους ὕστερον πολλοὺς. Πῇ δὲ; ἔφη. Μακρόν, ἦν δ' ἐγώ, τὸν θάνατον αὐτῷ ποιήσας. παρακολουθῶν γὰρ τῷ νοσήματι θανασίμῳ ὄντι οὔτε ἰάσασθαι οἶμαι οἷός τ' ἦν ἑαυτόν, ἐν ἀσχολίᾳ τε πάντων ἰατρευόμενος διὰ βίου ἔζη, ἀποκναιόμενος εἴ τι τῆς εἰωθυίας διαίτης ἐκβαίῃ, δυσθανατῶν δὲ ὑπὸ σοφίας εἰς γῆρας ἀφίκετο (= T8a 8 Grensemann). Preferisco tradurre δυσθανατῶν "con una lunga agonia" (cf. Hdt. IX 72.2) e non "lottando contro la morte", poiché è coerente con la prima battuta "facendosi lunga la morte".

¹² *Phdr.* 227d 4 ἔγωγ' οὖν οὕτως ἐπιτεθύμηκα ἀκοῦσαι, ὥστ' ἐὰν βαδίζων ποιῇ τὸν περίπατον Μέγαράδε καὶ κατὰ Ἡρόδικον προσβάς τῷ τείχει πάλιν ἀπίης, οὐ μὴ σου ἀπολειφθῶ. Cf. Sch. *Phdr.* 227d 1 Ἡρόδικον. ὁ Ἡρόδικος Σηλυμβριανὸς ἰατρὸς ἦν καὶ τὰ γυμνάσια ἔξω τείχους ἐποιεῖτο, ἀρχόμενος ἀπὸ τινος διαστήματος οὐ μακροῦ ἀλλὰ συμέτρου, ἄχρι τοῦ τείχους, καὶ ἀναστρέφων.

¹³ *Prt.* 316e 1 ἐνίοις δὲ τινας ἥσθημαι καὶ γυμναστικὴν, οἷον Ἴκκος τε ὁ Ταραντίνος καὶ ὁ νῦν ἔτι ὢν οὐδενὸς ἦτων σοφιστῆς Ἡρόδικος ὁ Σηλυμβριανός, τὸ δὲ ἀρχαῖον Μεγαρεύς (= T8a 4 Grensemann).

umorali o che avesse assegnato un particolare ruolo alla dietetica, anche se è ovvio che un preparatore atletico ad essa comunque avrebbe fatto attenzione. La menzione di *diaita* nel passo di *Repubblica* ha infatti un senso generale, anzi generico. Tuttavia la sua attività, divenuta concorrenziale a quella dei medici professionisti, potrebbe ben aver scatenato le critiche dell'autore del passo di *Epidemie* VI. Ma per il resto la sua immagine sembra quella di un *outsider*, marginale alla tradizione medica.¹⁴

La situazione delle fonti più tarde è molto confusa: Grensemann aveva già constatato la difficoltà e supposto che in realtà le due figure di Erodico di Cnido e di Selimbria fossero una sola.¹⁵ Di fatto egli tende ad utilizzare in questo senso, cioè a mescolare, le notizie dottrinali relative all'uno e all'altro medico. A me pare invece che la situazione sia esattamente al contrario: cioè che esistessero due (o più) medici di nome Erodico e che le fonti abbiano confuso l'uno con l'altro in svariate occasioni.

Vedremo come potrebbe essersi svolto questo processo di contaminazione attraverso un'analisi dei gruppi di fonti, ma prima mi sembra necessario ribadire alcune considerazioni di carattere preliminare.

1) L'Anonimo Londinese, che conosce due Erodico, va considerato, una fonte antica che rispecchia una fase precoce dell'ambiente del Peripato.¹⁶ Uno dei due medici, Erodico di Cnido, sembra non avere niente a che fare con la tradizione ippocratico-platonica, l'altro è purtroppo sfigurato da numerose lacune.

2) Un secondo fattore importante è costituito dall'enorme impatto che la testimonianza di Platone ha avuto sulla tradizione successiva, condizionandola fortemente: la dipendenza da Platone è palese e totale nel gruppo di fonti seguente, ma è rintracciabile anche in altre.

¹⁴ Sulla posizione marginale di Erodico, già Kollesch (1989a) 195. Secondo Smith (1989) 87, il ritratto platonico di Erodico fu preso alla lettera come fondatore della dietetica da medici interessati alla storia della disciplina. Dalla necessità di collegarlo ai numerosi trattati dietetici ippocratici sarebbe nata la notizia di Erodico come maestro di Ippocrate nella *Vita* di Sorano (ma cf. *infra*).

¹⁵ Grensemann (1975) 14–15: “Wenn man daran denkt, dass sowohl für den Herodikos aus Knidos wie auch für den aus Selymbria die primäre Krankheitsursache auf einem Missverhältnis zwischen Bewegung und Nahrungsaufnahme lag, scheint die Vermutung nicht abwegig, dass die beiden identisch sein könnten”. L'ipotesi su cui la proposta si regge (identità di opinione sulle cause di malattia) è tutta da dimostrare., come afferma già Kollesch (1989b) 19 s.

¹⁶ Cf. Manetti (1999) 95–141.

Plutarco, *Sul tardare della vendetta divina* (*De sera numinis vindicta* 554C 4): Prendete per esempio Erodotico di Selimbria: affetto da una consunzione, malattia incurabile, mescolò nel trattamento la ginnastica e la medicina. Platone dice che prolungò la morte a se stesso e alle vittime della medesima malattia¹⁷

Temistio *Orazione* 23.9 (289d–290a): ... e questo è un sofista come dice il primo dei componimenti che Platone dedicò a essi. Neppure il ginnasta Icco di Taranto o il maestro di ginnastica Erodotico di Selimbria si sottraggono a questa definizione, anzi Platone afferma che entrambi presero a pretesto le loro arti mentre in realtà erano veri e propri sofisti.

Plinio *Storia naturale* (*Naturalis Historia* 29,4 = T8a.3 Grensemann): *Prodicus (lege Herodicus) Selymbriae natus et discipulis eius (i.e. Hippocratis) instituit quam vocant iatralipticen*.¹⁸

3) Terzo elemento da considerare è che anche Galeno, nel commento al passo di *Epidemie* VI, dipende del tutto da Platone e non ha alcuna idea personale in proposito (anzi rigetta *in toto* il problema esegetico), tantomeno conosce un Erodotico di Cnido.¹⁹

D'altra parte Galeno sembra utilizzare schemi dossografici—certamente ereditati da altre fonti, e che si riscontrano anche in Celio Aureliano—i quali mettono in connessione Eurifonte (di Cnido) con un medico di nome Erodotico, di cui Galeno non sembra avere conoscenza diretta.

Sulle sostanze liquide utili e dannose (*De bonis malisque sucis*) 4 (6.775,9 K. = CMG V 4.2, 404, 17–22 [T20a Grensemann]): Quanto al latte di donna, in quanto appropriato e della nostra stessa natura, lo lodano prima di tutto il resto per la cura delle affezioni consuntive, fra molti altri medici in particolare Eurifonte e Erodotico e ritengono opportuno farlo succhiare, come i bambini dalla donna, a coloro che si trovano in tale condizione: uscendo infatti fuori dalla mammella perde subito qualcosa della propria virtù.

¹⁷ ὥσπερ γὰρ Ἡρόδικον τὸν Χηλυμβριανὸν εἰς φθίειν, ἀνήκεστον πάθος, ἐμπεσόντα καὶ μίξαντα πρῶτον ἀνθρώπων γυμναστικὴν ἱατρικὴν φησὶν ὁ Πλάτων μακρὸν ποιῆσαι τὸν θάνατον αὐτῷ καὶ τοῖς ὁμοίως νοσοῦσιν.

¹⁸ Cf. Gregorio di Nissa *Contro il destino* (*Contra fatum* 50,3): Erodotico 'paidotribes' secondo Platone.

¹⁹ *Commento a Ippocrate Epidemie VI* (*In Hipp. Epid. VI comm.* 17B.81,11 K. = CMG V 10,2,2 p. 167,18 e 17B.99,9 K. = CMG V 10,2,2 p. 177,8, cf. Palladio, *In Hipp. Epid. VI comm.* (II 96–98 Dietz).

Sulla consunzione (*De marcore*) 9 (7.701,11 K. [T20b Grensemann]) Ritengo che non ci sia niente di meglio del latte per simili affezioni, soprattutto se il malato accetta di succhiarlo appoggiando la bocca alla mammella della donna, come ritengono opportuno Eurifonte ed Erodico per i malati di consunzione; se non è possibile, allora prendere almeno il latte d'asina ancora caldo, che sia venuto a contatto con l'ambiente per pochissimo tempo.

Sul metodo terapeutico (*Methodus medendi*) 7.6 (10.474,14 ss. K. [= 20c Grensemann]) e il latte sarebbe la cosa migliore, se lo si succhiasse direttamente dalle mammelle, come ritengono Eurifonte [e Erodoto] e Erodico (Πρόδικος Kühn) i quali avevano una tale fiducia in esso per la ripresa del corpo che prescrivevano ai malati di consunzione di succhiarlo dal capezzolo della mammella di una donna.

Questa tradizione dossografica, che connette i nomi di Eurifonte ed Erodico, riguarda terapie ben precise (l'uso del latte di donna) di malattie specifiche (come la tisi) e sembra originata in un ambiente specialistico; essa si avvicina per impostazione alla dossografia dell'Anonimo Londinese, il quale fa seguire l'eziologia medica di Eurifonte e quella di Erodico e le paragona in dettaglio, prima di passare a Ippocrate. Si osservi la stessa connessione fra Eurifonte e Erodico (che sono seguiti, anche qui, dal resoconto sull'opinione di Ippocrate) nel capitolo sull'idropisia di Sorano-Celio Aureliano, a cui arriva per tramite di Asclepiade di Bitinia:

Celio Aureliano *Malattie croniche* (*tardae passiones*) 3.8.139, *CML* VI 1, 762.20–27 (= 19a Grensemann) Facciamo dunque seguire un resoconto storico (della terapia) dei singoli medici eccellenti, uno ad uno. Erodico, come ricorda Asclepiade, adopera la purificazione del ventre e il vomito dopo cena, che hanno la capacità di riempire piuttosto che di seccare. Poi utilizza bagni di vapore tiepidi ottenuti dall'esalazione di aceto decotto o di acqua di mare con mescolate erba thallia e issopo e simili. Egli raccomanda di riscaldare il corpo con vesciche di bue riempite o ordina di premere i luoghi tumescenti con altri strumenti gonfiati più grandi. Così anche l'antichissimo Eurifonte.²⁰

²⁰ *Singulatim denique nobilium medicorum historiam ordinemus. Herodicus igitur, ut Asclepiades memorat, ventris adhibet purgationem atque post cenam vomitus, qui sunt implebiles potius quam siccabiles. tunc vaporationibus tepidis aceti decocti exhalatione confectis utitur vel aquae marinae admixta thallia herba atque hyssopo et his similibus. vesicis bubulis repletis corpus vaporandum probat vel aliis quibusdam maioribus inflatis tumentia loca pulsari iubet. sic etiam antiquissimus Euryphon.*

A queste osservazioni si può, credo, farne seguire anche un'altra: che, per quanto Galeno menzioni (*Commento a Ippocrate Sulla natura dell'uomo, In Hipp. Nat. hom., CMG V 9.1, p. 15,26–16,11*) i cosiddetti *Menoneia* come una dossografia medica molto nota e corrente al suo tempo,²¹ questa sua conoscenza non corrisponde affatto alla conoscenza della dossografia riportataci dall'Anonimo Londinese: mi pare una conferma che le due dossografie (di 'Aristotele' nell'Anonimo Londinese e di 'Menone' citata da Galeno) debbano essere tenute separate. È poi del tutto possibile che in realtà Galeno avesse dei *Menoneia* una conoscenza non diretta ma mediata.

Vediamo ora i passi in cui Aristotele menziona personaggi di nome Erodico:

Etica Eudemia 1243 b 19–24: Quando cessi l'amore, come l'uno muta, anche l'altro muta e allora essi si rendono conto dell'equivoco, così come disputarono Pitone e Pammene; e così disputano il discepolo e il maestro (poiché la scienza e il denaro non si misurano con lo stesso metro); e così il medico Erodico con il cliente che gli aveva pagato un onorario piccolo; e tale è il caso del citaredo e del re: questo considerare il primo piacevole, quello invece lo considerare utile.²²

Retica 1361 b 3–6: La virtù del corpo è la salute e questa consiste nel far uso del corpo senza malattie. Molti infatti sono sani nel senso in cui si diceva lo fosse Erodico, e nessuno li considererebbe felici per la loro salute, perché si astengono da tutti i piaceri umani o dalla maggioranza di essi.²³

Retica 1400 b 16–22: [Un altro "luogo" è quello basato sul significato di un nome . . .] Un esempio è nel modo in cui gli uomini sono soliti lodare gli dei; oppure nel modo in cui Conone chiamava Trasibulo *thrasyboulos* o Erodico diceva a Trasimaco "sei sempre *thrasmachos*" o a Polo "sei sempre *polos*" o a proposito del legislatore Draconte che le sue leggi erano leggi non di un uomo ma di un *drakon*.²⁴

²¹ Su questa attribuzione ad uno scolaro di Aristotele vedi Manetti (1986) 57–74.

²² ὅταν δὲ παύσῃται τοῦ ἔρᾶν, ἄλλου γινομένου ἄλλος γίνεται, καὶ τότε λογίζονται τί ἂντι τίνας, καὶ ὡς Πύθων καὶ Παμμένης διεφέροντο καὶ ὡς διδάσκαλος καὶ μαθητῆς (ἐπιτήμη γὰρ καὶ χρήματα οὐχ ἐνὶ μετρεῖται), καὶ ὡς Ἡρόδικος ὁ ἰατρὸς πρὸς τὸν ἀποδιδόντα μικρὸν τὸν μισθόν, καὶ ὡς ὁ κιθαρωδὸς καὶ ὁ βασιλεὺς. ὁ μὲν γὰρ ὡς ἡδεῖ, ὁ δ' ὡς χρήσιμῳ ὁμῖλει. I codici hanno Πρόδικος per Ἡρόδικος.

²³ σώματος δὲ ἀρετὴ ὑγίεια, αὕτη δὲ οὕτως ὥστε ἀνόους εἶναι χρωμένους τοῖς σώμασιν· πολλοὶ γὰρ ὑγιαίνουν, ὥς περ Ἡρόδικος λέγεται, οὐς οὐδεὶς ἂν εὐδαιμονίειε τῆς ὑγείας διὰ τὸ πάντων ἀπέχεσθαι τῶν ἀνθρωπίνων ἢ τῶν πλείστων. Cf. *Commento anonimo alla Retica* (In *Arist. Rh.*) 18.28 Rabe.

²⁴ καὶ ὡς ἐν τοῖς τῶν θεῶν ἐπαίνοις εἰώθει λέγειν, καὶ ὡς Κόνων Θρασύβουλον

I primi due passi citano entrambi un medico di nome Erodico, ma il primo contiene solo un'allusione generica al fatto di farsi pagare i servigi, mentre l'altro sembra alludere ad un medico che ha in effetti le stesse caratteristiche di utilizzatore di terapie mortificanti dell'Erodico di Selimbria in Platone. Non siamo però autorizzati a vedere nel primo passo un'allusione allo stesso Erodico di Selimbria: il farsi pagare la terapia è un fattore troppo generale che poteva essere pertinente a molti medici noti e, in fondo, ad Atene doveva essere molto conosciuto anche Erodico di Lentini, fratello di Gorgia.

Il terzo passo, *Rh.* 1400 b, contiene la citazione di un Erodico nel contesto dell'esposizione dei "luoghi" (*topoi*) basati sul significato dei nomi: non si specifica affatto se sia medico o no, ma il passo ci parla di personaggi che erano soliti fare giochi di parole sulla base del significato di nomi propri. Uno scolio *ad locum* (Anon. in *Rhet.* 146,24 Rabe) indica che qui si parla di un Erodico storico ateniese, peraltro del tutto ignoto, ma la notizia pare del tutto autoschediastica. In realtà i personaggi coinvolti nel discorso (Erodico diceva a Trasimaco "sei sempre 'audace nel combattere'" o a Polo "sei sempre un 'puledro'" ecc.), cioè Trasimaco e Polo, ci riportano ai famosi sofisti personaggi dei dialoghi platonici e rendono plausibile che chi li apostrofava così fosse in realtà Prodico (e non Erodico), famosissimo per il suo interesse per il significato dei nomi. Aveva perciò una qualche ragione Spengel a proporre la correzione, che è però rimasta confinata negli apparati delle edizioni della *Rhetorica* probabilmente a causa della disapprovazione di Diels.²⁵

Le testimonianze del gruppo che segue presentano schemi storiografici sullo sviluppo della medicina: un Erodico sarebbe fondatore

θρασύβουλον ἐκάλει, καὶ Ἡρόδικος Θρασύμαχον "ἀεὶ θρασύμαχος εἶ", καὶ Πῶλον "ἀεὶ δὲ πῶλος εἶ", καὶ Δράκοντα τὸν νομοθέτην, ὅτι οὐκ [ἄν] ἀνθρώπου οἱ νόμοι ἀλλὰ δράκοντος.

²⁵ Diels in *VS* II 320, 7 (= Thrasymachus A6) riporta in apparato la sua proposta di integrare <Σελυμβριανός>, definendo—in modo ingiusto—«ohne Grund» la proposta di Spengel di correggere in Πρόδικος. Ross (1959) menziona le due proposte in apparato, attribuendo le seguenti lezioni ai codici: Ἡρόδικος A: Ἡρόδοτος Γ. La corruzione è facile in scrittura maiuscola in tutti e due i sensi, come mostra il passo di *Etica Eudemia*, e può essere antica (cf. il caso di 'Prodicus' al posto di 'Herodicus' in Plin. *NH* 29,4, che probabilmente deriva da un errore già della sua fonte greca).

della dietetica, un Erodico avrebbe sviluppato la sua dottrina dall'esperienza personale. Ma le testimonianze si dividono in due sotto gruppi con caratteristiche diverse.

1) Scolio a Omero, *Iliade* Λ 515c: Alcuni dicono che la parte chirurgica e quella farmacologica (della medicina) furono scoperte dagli antichi, ma della parte dietetica fu iniziatore Erodico e la portarono a compimento Ippocrate, Prassagora e Crisippo [bT] Poiché (gli antichi) non conoscono la dietetica, "il male che viene da Zeus non puoi evitarlo" ecc.²⁶ = Porfirio, *Ricerche omeriche sull'Iliade* (*Quaest. hom. ad Il.*) Λ 515 (165, 11 Schrader) = T 8A.13 Grensemann: Alcuni dicono che la parte chirurgica e quella farmacologica (della medicina) furono scoperte dagli antichi, ma della parte dietetica fu iniziatore Erodico e la portarono a compimento Ippocrate, Prassagora e Crisippo.

Cf. Eustazio. *Commento all'Iliade* Λ 514 (859, 38): Osserva che il buon medico greco qui si occupava di ferite, ma il poeta non menziona la dietetica. Dicono che la parte chirurgica e farmacologica fossero state trovate dagli antichi, ma che Ippocrate iniziò la dietetica e la perfezionarono Erodico e Prassagora e Crisippo. Altri invece intendono che Macaone esercitasse la chirurgia, ma Podalirio, anche lui soldato, come mostrerà altrove il poeta, esercitasse la dietetica.

2) Scolio a Omero, *Iliade* I 453b: Sono buoni maestri coloro che si sono formati nell'esperienza delle malattie: e infatti dicono che Chirone essendo stato ferito alla mano esercitò la medicina che si basa sulle piante, mentre la medicina dietetica la esercitò Erodico di Selimbria l'allenatore, il quale essendosi ammalato di consunzione a causa della sua fatica sviluppò l'arte²⁷ = Porfirio, *Ricerche omeriche sull'Iliade* (*Quaest. hom. ad Il.*) I 453 (140,10 Schrader): Sono buoni maestri quelli che si sono formati nell'esperienza delle malattie: e infatti dicono che Chirone essendo stato ferito alla mano abbia costituito la medicina che si basa sulle piante, quella che si basa sulla dieta invece Erodico di Selimbria, il quale ammalatosi di consunzione per i suoi sforzi sviluppò con grande pena questa arte.

²⁶ οἱ μὲν οὖν φασιν ὅτι τὸ χειρουργικὸν καὶ τὸ φαρμακευτικὸν εὗρητο παρὰ τοῖς παλαιοῖς (cf. sch. D ad Λ 846)· τοῦ γὰρ διαιτητικοῦ Ἡρόδικος μὲν ἤρξατο, συνετέλεσε δὲ Ἱπποκράτης, Πραξαγόρας (fr. 36 St.), Χρύσιππος (sc. medicus), [bT] ὅτι δὲ οὐκ ἴσασι τὸ διαιτητικόν, "νοῦσον δ' οὐ πως ἔστι Διὸς μεγάλου ἀλέαθαιή (ι 411) κτλ.

²⁷ ἀγαθοὶ δὲ διδάσκαλοι, οἱ ἐν πείρᾳ παθημάτων γεγονόσιν· καὶ Χείρωνα γάρ φασι τρωθέντα τὴν χεῖρα τὴν περὶ βοτανῶν ἐπιτηδεύσαι ἰατρικὴν, τὴν δὲ περὶ τὰς διαίτας τὸν Σηλυμβριανὸν Ἡρόδικον τὸν παιδοτρίβην, ὃς ἐμπεσὼν διὰ τοὺς πόνους εἰς φθόγην ἐμελέτησε τὴν τέχνην.

cf. Eustazio *Commento all'Iliade* I 453 (763,16): E infatti dicono che Chirone essendo stato ferito alla mano abbia concepito la medicina che si basa sulle piante e che Erodico di Selimbria maestro di ginnastica essendosi ammalato di consunzione per gli sforzi fisici abbia sviluppato la dietetica.

Lo scolio omerico a *Λ* 515 è stato attribuito con buone ragioni ad epoca ellenistica,²⁸ cioè ad un'epoca in cui Ippocrate è un medico, seppur importante, fra tanti altri e non ha ancora acquistato il ruolo privilegiato assegnatogli dalla tradizione posteriore: perciò il quadro è variegato, la dietetica inizia con Erodico, continua poi con una serie di personaggi, Ippocrate, Prassagora e Crisippo (tutti medici di una fase preellenistica). La versione di *sch.* *Λ* 515 parla di un Erodico senza etnico come fondatore della dietetica. Lo scolio a I 453b invece specifica che Erodico di Selimbria si occupò di dieta sulla base della sua vicenda personale: c'è da notare però che qui si introduce in uno schema storiografico di sviluppo della medicina un motivo diverso, che è indipendente dalle sue branche specifiche, cioè l'elemento unificante della *peira*, dell'esperienza personale che insegna e fa scoprire le cose in tutti i campi. È dunque un'angolazione diversa, che sembra mescolare un motivo di origine platonica (come la vicenda di Erodico di Selimbria) con temi cari ai medici di scuola empirica e sembra totalmente autonomo dallo schema storiografico di *sch.* *Λ* 515. Poiché assolutamente niente nei testi di Ippocrate e Platone, che ne sono la fonte primaria, autorizza a vedere in Erodico di Selimbria un medico specializzatosi nella dietetica, sembra di poter concludere che la tradizione rispecchiata dallo scolio a *Λ* 515 non si riferiva originariamente a Erodico di Selimbria, bensì a Erodico di Cnido, che a quanto pare (secondo la testimonianza dell'Anonimo che, abbiamo detto, risale ad ambiente peripatetico antico) fu il primo a considerare causa di malattia lo squilibrio fra cibo e movimento. L'impostazione della notizia di *sch.* *Λ* 515 si affianca piuttosto alla dossografia dell'Anonimo Londinese, che dispone in una sequenza analoga Eurifonte, Erodico e Ippocrate. Nell'altro gruppo di testimonianze Erodico non è messo in connessione, temporale o

²⁸ Edelstein (1931) 123; 135–142.

dottrinale, con altri medici, ma valorizzato solo per il rapporto fra esperienza e sviluppo dell'arte. La larga notorietà ottenuta da Erodico di Selimbria attraverso le citazioni platoniche ha fatto sì che la sua vicenda fosse assunta come emblematica di una preparazione tecnica ottenuta attraverso l'esperienza personale e il suo nome si sovrapponesse nel tempo all'altro Erodico, che era presumibilmente noto solo agli specialisti. Si noti di passaggio il rovesciamento caratteristico operato nella testimonianza di Porfirio Eustazio per Asis, dove Ippocrate è diventato lo scopritore, il *protos heures* della dietetica, mentre Erodico è retrocesso al secondo posto.

Ad una anteriorità di un Erodico rispetto a Ippocrate sembrerebbe alludere anche la tradizione biografica di Ippocrate. Ecco i passi rilevanti:

Sorano *Vita di Ippocrate* 2 (CMG IV 175,8, cf. T8a 13 Grensemann): Menzionano la sua genealogia Eratostene e Ferecide e Apollodoro e Ario di Tarso. Divenne scolaro del padre Eraclide, poi di Erodico, ma secondo alcuni del retore Gorgia di Lentini, e del filosofo Democrito di Abdera.²⁹

Suda s.v. Ippocrate (= T8a.2 Grensemann): Egli divenne allievo dapprima del padre, e in seguito di Erodico di Selimbria e del retore Gorgia di Lentini e del filosofo, secondo alcuni Democrito—giacché quello, ormai vecchio, lo incontrò quando era giovane—ma secondo altri anche Prodic.³⁰

La versione biografica più antica, rispecchiata nella *Vita* attribuita a Sorano, afferma che Ippocrate fu allievo del padre Eraclide, poi di Erodico o secondo alcuni di Gorgia retore, e del filosofo Democrito. Il legame simbolico con Democrito è stato reso famoso dalle *Epistole* pseudoippocratiche, ma la formulazione relativa ai maestri di Ippocrate fa sorgere qualche dubbio. Il primo maestro, il padre Eraclide, è separato nettamente dagli altri: *in seguito* (εἰτά) egli seguì Erodico o, in alternativa secondo alcuni, il retore Gorgia e un filosofo come

²⁹ μνημονεύει δὲ τῆς γενεαλογίας αὐτοῦ Ἐρατοθένης καὶ Φερεκύδης καὶ Ἀπολλόδορος καὶ Ἄρειος ὁ Ταρσεύς· μαθητὴς δὲ γέγονεν Ἡρακλείδα τοῦ [ιδίου] πατρός, εἴτα Ἡροδίκου, κατὰ δὲ τινὰς καὶ Γοργίου τοῦ Λεοντίνου ῥήτορος, φιλοσόφου δὲ Δημοκρίτου Ἀβδηρίτου.

³⁰ *s.v.* Ἱπποκράτης . . . οὗτος μαθητὴς γέγονε τὸ μὲν πρῶτον τοῦ πατρός, μετὰ δὲ ταῦτα Ἡροδίκου τοῦ Σηλυμβριανοῦ καὶ Γοργίου τοῦ Λεοντίνου ῥήτορος καὶ φιλοσόφου, ὡς δὲ τινες, Δημοκρίτου τοῦ Ἀβδηρίτου· ἐπιβαλεῖν γὰρ αὐτὸν νέωι πρεσβύτην· ὡς δὲ τινες καὶ Προδίκου. Cf. Tzetzes *Chiliades* 7.155. Non può avere alcun valore di argomento la presenza di Erodico di Selimbria nel testo di Tzetzes.

Democrito. L'espressione κατὰ δέ τινας introduce un'alternativa a quanto precede, limitatamente al nome di Erodico, io credo. Si può confrontare la struttura simile della notizia relativa all'educazione di Euripide in *Suda*, s.v. *Euripide* (ε 3695) "divenne dapprima pittore, in seguito allievo di Prodico per la retorica e di Socrate negli argomenti etici e filosofici (εἶτα μαθητὴς Προδίκου μὲν ἐν τοῖς ῥητορικοῖς, Σωκράτους δὲ ἐν τοῖς ἠθικοῖς καὶ φιλοσόφοις). Sembra perciò assurdo che nella vita di Ippocrate Erodico sia posto in alternativa a Gorgia (anche se intendiamo καί come "anche"). In realtà, la notizia biografica sembra organizzata in modo da attribuire una strutturazione simbolica all'educazione di Ippocrate, divisa fra medicina (la tradizione paterna degli Asclepiadi), retorica (Gorgia e/o Erodico?!) e filosofia (Democrito).³¹ Se si considera questo aspetto, si comprende che in realtà, anche qui, è più opportuno leggere al posto di Erodico il nome Prodico, il quale può essere messo in contrasto o essere affiancato con il suo contemporaneo Gorgia senza suscitare scandalo. È da notare che nella vita di Euripide Prodico assolve il compito di insegnante di retorica. La versione che passa poi nella voce Ippocrate della *Suda* è geminata e contiene sia Erodico (che è divenuto caratteristicamente nel frattempo E. di Selimbria) sia Prodico, in una sequenza molto pasticciata: non c'è nessuna ragione di ritenere che sia Prodico il nome interpolato piuttosto che Erodico.³² Che Prodico avesse grande fama e fosse spesso in coppia con Gorgia lo si può vedere da molte fonti. Inoltre Prodico, a causa della sua scienza dei nomi, ebbe fortuna nella tradizione retorica e grammaticale³³ come campione di discorsi, il che rende plausibile il ruolo attribuitogli nella vita di Ippocrate.³⁴

³¹ Come osserva Pinault (1992) 10.

³² Cf. Pinault (1992) 20. In *Meth. Med.* 10.474,14 ss. il testo di Kühn offre il nome Prodico, sicuramente erroneo al posto di Erodico (cf. *supra*), ma bisognerebbe controllare i codici. In ogni caso dal punto di vista paleografico l'errore è facile in entrambe le direzioni.

³³ Cf. p. es. Cicerone *Sull'oratore* 3.128, *Bruto* 30; Quintiliano 3.1.12.

³⁴ Prodico fu reso molto famoso dal suo apologo di Eracle al bivio (cf. p. es. Filostrato *Vite dei sofisti*. 1.482.18; 496.5; Quintiliano 9.2.36) e inoltre, fin da Platone, è accoppiato a Gorgia e Ippia come 'educatori', cf. *Apologia* 19e; *Teage* 127e; in *Fedro* 267b si vanta di essere il solo ad aver scoperto la *technè* dei discorsi *metrioi*. Dionigi di Alicarnasso pone come maestri di Isocrate Prodico, Gorgia e Tisia (*Su Isocrate* 1.10 Radermacher); Marcellino *Vita di Tuciddide* 36.4 riporta la notizia del grammatico Antillo secondo cui Tuciddide imparò da Gorgia le antitesi e da Prodico la *akribologia* dei nomi.

Altre fonti confondono del tutto le acque, come il passo di Luciano *Come si debba scrivere la storia* (*Quomodo historia conscribenda* 35)³⁵ in cui la tradizione su Erodico, derivata da Platone, si mescola con elementi della biografia di Ippocrate—come il viaggio alla corte di Perdicca, che avrebbe visto in realtà Ippocrate, accompagnato dal più vecchio Eurifonte—e di altri medici famosi come Erasistrato (l'allusione ad Antioco).

Un'altra fonte ancora è Censorino, *De die natali* 17.2 (= T8a.10 Grensemann), il quale attribuisce ad un Erodico, senza specificazioni, la teoria che i *saecula* dell'uomo sono formati di venticinque anni; una notizia del genere non si riferisce necessariamente ad un personaggio medico. In fondo la notizia potrebbe riguardare anche un grammatico che si occupi di cronologia letteraria e sono attestati grammatici con questo nome (p. es. Erodico di Babilonia).

Infine un medicamento di Erodico (ἡροδίκου βοήθημα), senza aggettivi, è testimoniato da Aezio 10.29, p. 59,22–27 Wellmann (= T19b Grensemann) e risale ad una tradizione medica che si rifa ad Archigene ed Erodoto, medici pneumatici. Anche in questo caso non c'è nessuna ragione cogente per identificare l'Erodico citato da Aezio con uno qualsiasi degli altri noti, anche se si tratta di un trattamento di tipo esterno di gonfiori che potrebbe adattarsi ad Erodico di Selimbria.

Alla fine di questa escursione attraverso le testimonianze sui medici di nome Erodico il bilancio è purtroppo negativo. Abbiamo perduto almeno un paio di 'Erodico' per 'Prodico' (Arist. *Rh.* 1400b e Sorano *Vita di Ippocrate*), in compenso abbiamo acquistato qualche altro Erodico dai contorni indefiniti, che non aiuta molto a rendere più chiaro il contesto in cui collocare la citazione del secondo Erodico nell'Anonimo Londinese: che è appunto il problema da cui sono partita.

Fin dall'origine Diels e la critica immediatamente successiva hanno tentato di raccogliere tutte le possibili analogie fra la dossografia dell'Anonimo e il *Corpus Hippocraticum*, non solo per autori già noti prima della pubblicazione del papiro, come Eurifonte, Polibo o Dessippo, ma anche per tutti gli altri. È una scelta ovvia e forse inevitabile, ma assai pericolosa, perché rischia di appiattire tutto su quella particolarissima selezione di opere mediche antiche, a noi pervenutaci sotto il nome di *Corpus Hippocraticum*.

³⁵ Luciano *Come si debba scrivere la storia* 35 (= T 8a.16 Grensemann).

L'analisi del testo della dossografia dell'Anonimo Londinese rivela non solo la presenza di un linguaggio di matrice aristotelica che condiziona fortemente il modo con cui le notizie sono filtrate, a cominciare dal concetto stesso di *perittoma*, ma anche la presenza di uno schema espositivo a rubriche fisse che tende a deformare il materiale di partenza per adattarlo alla griglia problematica imposta.³⁶ Nel resoconto su Erodico di Cnido termini caratteristici di questo linguaggio sono διοικεῖσθαι, ἀκατέργατος, ἐπίτασις, ἄνεσις. Tuttavia è notevole che, per quanto il processo di formazione dei *perittomata* o 'residui' nocivi e delle conseguenti forme di malattia sia tradotto in linguaggio postaristotelico, i due umori (pur descritti con un termine posteriore, ὑγρότης) siano riportati con la perifrasi "umore amaro" e "umore acido". Ciò deve far riflettere che forse in questo specifico punto la dossografia—come è dimostrabile in altri casi³⁷—è precisa e attendibile. Bisogna perciò evitare di identificare o di avvicinare troppo questa coppia di umori con la coppia bile—flegma, come Fredrich ha proposto,³⁸ collocando Erodico all'origine della eziologia binaria della scuola di Cnido.

Per quanto riguarda la identificazione del secondo Erodico dell'Anonimo Londinese, la situazione se possibile, si presenta ulteriormente aggravata, dopo le precedenti considerazioni, perché gli elementi a favore di un'eventuale candidatura di Erodico di Selimbria sono pressoché inesistenti. Nei resti della colonna IX (20–36) si rintracciano alcuni concetti di carattere generalissimo come l'opposizione fra uno stato 'secondo natura' e uno 'contro natura'; si parla di dolore (?); probabilmente si forniva una definizione di medicina come arte che riporta allo stato di natura. Niente è più lontano dall'Erodico platonico, sostenitore di terapie fisiche debilitanti e estreme. Una considerazione esterna può tuttavia aiutare a collocare l'eziologia di questo Erodico in un contesto più ampio. Se la ricostruzione della struttura originaria della dossografia usata dall'Anonimo, che ho tentato qualche anno fa, è sostenibile, la sezione sulle eziologie basate

³⁶ Cf. Thivel (1981) 363–64; Manetti 1999, 103. Una deformazione determinata dalla struttura espositiva che prevede la descrizione in dettaglio della diversificazione delle malattie potrebbe rendere ragione della presenza ripetuta di τόπος a col. V 22 e 29, che ha indotto—in modo non necessario, secondo me—a considerare corrotto il primo caso (Grensemann 1975, 12 e 14).

³⁷ Manetti (1990) 219 ss.

³⁸ Fredrich (1899) 35 ss. Thivel (1981) 304–305, accosta a Erodico i due umori del trattato *Sulle ghiandole* (*Gland.*), ma mantiene la distanza.

sui *perittomata*, era divisa in una prima parte comprendente dottrine basate su una concezione di *perittoma* come prodotto patologico e una seconda comprendente dottrine basate su una concezione di *perittoma*, più aristotelica, come secrezione naturale del corpo.³⁹ La notizia relativa al secondo Erodico si trova nella seconda parte, che inizia con la menzione di Abas a col. VIII 45.

Stando così le cose, e nell'assenza di informazioni più precise, non resta che essere molto prudenti nell'integrazione delle lacune del passo e concludere che, anche se ci piacerebbe molto a questo punto identificare questo Erodico con il medico di Lentini, il negletto fratello di Gorgia, il personaggio è destinato a rimanere—almeno per il momento—desolantemente ignoto.

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³⁹ Manetti (1999) 113–114.

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HIPPOKRATISCHES BEI PRAXAGORAS VON KOS?

Diethard Nickel

Summary

In his collection of the fragments of Praxagoras, F. Steckerl has argued that in his etiological ideas on some mental diseases, Praxagoras was influenced by Hippocratic thinking as attested in the Anonymus Londinensis and in De prisca medicina. But critical comparison of these texts with Praxagoras' fragments 70/71 clearly shows that there is no connection between the respective doctrines. As for epilepsy, however, some elements can be found that are common to Praxagoras and to the Hippocratic treatise De morbo sacro; however, these do not prove that Praxagoras was dependent on this text, but that both Praxagoras and the author of this work were woven into a more general network of relations.

Man kann sich schwer vorstellen, daß ein wissenschaftlich interessierter Arzt, der um 300 v. Chr. auf Kos seine Wirkungsstätte hatte, mit dem Gedankengut aus dem Umkreis des berühmtesten koischen Arztes, Hippokrates, nicht konfrontiert gewesen sein sollte. Dabei äußert sich geistige Konfrontation in verschiedener Weise: sie vollzieht sich in einer kritischen Musterung vorhandener Auffassungen, die entweder auf Akzeptanz mit möglicher Modifikation und Weiterentwicklung oder auf—sei es ausdrückliche, sei es stillschweigende—Ablehnung hinauslaufen kann. Für Praxagoras von Kos,¹ der mehrere Generationen nach Hippokrates gelebt hat, ist in der vorangehenden Forschung nachgewiesen worden, daß er in einem wesentlichen Bestandteil seiner Lehre, der Säftetheorie, die bei ihm eine eigenwillige Prägung erhalten hat, an hippokratische Vorstellungen anknüpfte und sie weiterentwickelte.²

Im Anschluß an dieses Ergebnis soll in den hier vorzutragenden Überlegungen der Frage nachgegangen werden, ob sich in dem insgesamt dürftigen Material an Fragmenten, die uns aus den Werken

¹ Die Fragmente liegen in der Edition Steckerl (1958) 45–107 vor.

² Siehe Kollesch (1976) 1339–1342, bes. 1340 f.; 1342.

des Praxagoras erhalten sind, weitere Anhaltspunkte finden, die mit ähnlicher Sicherheit eine positive Antwort rechtfertigen. Im Mittelpunkt der Betrachtung stehen die Fragmente 70 und 71 (S. 80; 81 Steckerl).³ Für diese beiden Bruchstücke, die nur in indirekter Wiedergabe vorliegen, deren authentischer Wortlaut also nicht gesichert ist, stellt der Herausgeber der Sammlung in seiner zusammenfassenden Studie über die Praxagoreischen Lehrmeinungen fest, es bestehe "ohne jeden Zweifel völlige Übereinstimmung" ("complete agreement") zwischen ihnen und dem Bericht, den der Anonymus Londinensis von der Lehre des Hippokrates gibt.⁴ Diese These hat bereits J.-H. Kühn in seiner Rezension der Fragmentsammlung⁵ stark in Zweifel gezogen.

Das Problem, ob sich hippokratische Vorstellungen in diesen doxographischen Notizen über Praxagoras nachweisen lassen, ist doppelt kompliziert, da es zwei Fragen umfaßt. Zunächst geht es um das von Steckerl behauptete enge Verhältnis der Praxagorasfragmente zu der Darstellung in dem Londoner Papyrus, und dabei ist zu klären, ob sich in den Bruchstücken tatsächlich in inhaltlicher oder terminologischer Beziehung deutliche Anklänge an den Bericht zeigen, den der Aristotelesschüler Menon über die Lehre des Hippokrates gibt. Sollte dies der Fall sein, so ist an zweiter Stelle zu fragen, inwieweit das Referat im Anonymus Londinensis Entsprechungen in dem medizinischen Traditionsgut hat, das uns im weiteren Sinne als hippokratisch überliefert ist.

Wir befassen uns zunächst mit der Interpretation der beiden Fragmente ätiologischen Inhalts. Fragment 70 behandelt die Ursache der Epilepsie (*epilēpsia*). Danach hat Praxagoras die Meinung vertreten, diese Krankheit entstehe „im Bereich der dicken Arterie“ (*pacheia artēria*), der Aorta,⁶ wenn sich in ihr schleimige Säfte zusammen-

³ Quelle dieser Fragmente ist die Krankheitsschrift des sogenannten Anonymus Parisinus *Über akute und chronische Krankheiten* (*De morbis acutis et chroniis*); s. hierzu van der Eijk (1999) 295–331. Es handelt sich um die Textstücke 3,1,1; 20,1,1 (S. 18,10–15; 120,12–17 Garofalo). Zu Prax., Fragm. 70 s. auch van der Eijk (2000/2001), Diokl., Fragm. 98 (Bd. 1, S. 176,1–6; Bd. 2, S. 197 f.), ferner Temkin (1994) 55 f. Die von Capriglione (1983) 116 f. gebotene italienische Übersetzung der Fragmente 70 und 71 ist lediglich eine Übertragung der englischen Version von Steckerl.

⁴ Siehe Steckerl (1958) 7 f.; Zitat ebd. 8; s. auch ebd. 38–41.

⁵ Kühn (1962) 135; 137. Vgl. auch die skeptische Stellungnahme von Smith (2002) 189, der jedoch auf Steckerls Argumentation nicht näher eingeht.

⁶ Zu der bei Praxagoras üblichen Bezeichnung der Aorta als *pacheia artēria* s. Prax., Fragm. 8 (S. 48 Steckerl).

ballen. Dadurch, daß diese Säfte Bläschen bilden (*pompholugoumenoi*), werde der Durchgang des vom Herzen ausgehenden Seelenpneumas (*psychikon pneuma*) versperrt, und auf diese Weise versetze das Pneuma den Körper in schüttelnde Bewegungen und Krämpfe. Wenn die Bläschen (*pompholuges*) wieder verschwunden sind, höre die Krankheit (*pathos*) auf, womit der einzelne Anfall gemeint sein dürfte.

Schleimige Säfte gehören nach der Physiologie des Praxagoras zu den konstitutiven Bestandteilen des Körpers.⁷ Eine von dem normalen Zustand abweichende Art dieser Säfte, der kalte und dicke Schleim, ruft durch seine Konzentration im Bereich des Arteriensystems bestimmte Erkrankungen, speziell Schlaganfall (*apoplêxia*) und Lähmung (*paralusi*), hervor.⁸ Im Fall der Epilepsie ist das die Krankheit verursachende Moment die Zusammenballung schleimiger Säfte in der Aorta. Die Säfte werden durch Bläschenbildung aufgetrieben und blockieren dadurch das Gefäß. Die Blockade der Aorta, die als Leitungsbahn für das Seelenpneuma fungiert, löst durch den Stau des Pneumas den epileptischen Anfall aus, der mit dem Verschwinden der Bläschen abklingt. Anomal ist an dem beschriebenen Zustand—wie bei Schlaganfall und Lähmung—bereits das Vorhandensein der schleimigen Säfte im Arteriensystem, das nach der Auffassung des Praxagoras normalerweise keine Säfte, sondern nur Pneuma enthält.⁹ Auf welchem Wege die Säfte in die Aorta gelangen, bleibt eine offene Frage. Der krankhafte Prozeß besteht aber besonders in deren Zusammenballung und in der Bildung der Bläschen. Dabei ist hervorzuheben, daß über deren Inhalt nichts ausgesagt wird. Es wird auch nicht davon gesprochen, daß die Bläschen platzen und ihren Inhalt freigeben; der Beschreibung ist lediglich zu entnehmen, daß sie wieder verschwinden (*katastatheisôn tôn pompholugôn*). Die Annahme Steckerls, es gebe einen Zusammenhang zwischen den Bläschen und den dem Körper eigenen Winden (*phusai*),¹⁰ hat im Wortlaut des Textes keine Stütze.

Wegen der Knappheit seiner Aussagen und einer gewissen Unsicherheit in textkritischer Hinsicht ist das Fragment 71 wenig

⁷ Dies ergibt sich aus Prax., Fragm. 22 (S. 59 f. Steckerl). Danach unterschied Praxagoras bei der Gattung „Schleim“ einen süßen (*glukus*), einen gleichmäßig gemischten (*isokratos*) und einen glasartigen (*hualoeidês*) Saft. Zu der ihm eigenen Säftelehre s. auch Prax., Fragm. 21 (S. 58 f. Steckerl).

⁸ Siehe Prax., Fragm. 74 f. (S. 81 f. Steckerl).

⁹ Siehe Prax., Fragm. 9; 84 (S. 48; 84 f. Steckerl).

¹⁰ Siehe Steckerl (1958) 39; vgl. auch ebd. 8.

ergiebig.¹¹ Referiert wird hier Praxagoras' Ansicht von der Ursache der Verzückung (*entheastikon pathos*). Diese Krankheit habe ihr Zentrum im Bereich des Herzens selbst und der "dicken Arterie". Hierbei komme es auch in gewissem Umfang zu einem Aufsteigen der Bläschen. "Denn durch sie werde die Krankheit entfacht",¹² bei der die Betroffenen während des Anfalls bald die Arme, bald den Kopf hin- und herwerfen.

Auch in diesem Fragment ist—außer dem Herzen—die Aorta der Ausgangspunkt des krankhaften Geschehens. Wie bei der Epilepsie spielen auch hier die Bläschen die entscheidende Rolle. Aber der Sachverhalt ist in dem vorliegenden Fragment noch weniger durchsichtig als in Fragment 70: Hat man sich auch hier schleimige Säfte im Arteriensystem vorzustellen? In welcher oder aus welcher Substanz steigen die Bläschen auf, und was enthalten sie? Auf diese Fragen gibt der Text keine Antwort.

Der Blick richtet sich jetzt auf Hippokrates, und es ist zu prüfen, ob dessen Krankheitslehre, wie sie in dem Bericht des Anonymus Londinensis widergespiegelt wird, wenigstens Ähnlichkeiten mit den Aussagen in den analysierten Fragmenten des Praxagoras aufweist. Dabei ist mit großer Wahrscheinlichkeit anzunehmen, daß dem betreffenden Abschnitt in dem Londoner Papyrus ungeachtet einiger Abweichungen die hippokratische Schrift *Über die Winde* (*De flatibus*) zugrunde liegt.¹³ Nach der Darstellung im Anonymus Londinensis (V 35–VI 13. 31–43)¹⁴ hat Hippokrates die allgemeine These aufgestellt, die (im Körper entstehenden) Winde (*phusai*) seien für die Krankheit verantwortlich. Hierbei werden Differenzierungen getroffen. Bedingt durch die Menge, die Mannigfaltigkeit, die Stärke und Schwerverdaulichkeit der Nahrungsstoffe, die ein Mensch zu sich nimmt, kön-

¹¹ Als Text ist für dieses Fragment zugrunde zu legen Anon. med., *De morbis acutis et chroniis* 20,1,1 (S. 120,12–17 Garofalo).

¹² Im Anschluß an P1 (Parisinus suppl. Gr. 636) lese ich S. 120,16 Garofalo διὰ τούτων: διὰ τούτο V (Vindobonensis med. Gr. 38) L (Wellcome 52 b) Garofalo. Statt ἐκκενοῦται VL Garofalo: ἐπανακαινοῦται P1 konjiziere ich ἐκκαίεται. ἐκκενοῦται (sc. τὸ πάθος)—"It is . . . evacuated"—ist in diesem Zusammenhang sinnlos. Zu der Emendation vgl. den Ausdruck ἐκκαίεται . . . τὸ πάθος, 20,3,2 (S. 122,13 Garofalo).

¹³ Einen Überblick über die Diskussion der Frage, ob das Referat des Menon die Schrift *De flatibus* zur Grundlage hat, bietet Jouanna (1988) 39–47, der dies auch seinerseits trotz der bestehenden Differenzen zwischen den beiden Zeugnissen für möglich hält.

¹⁴ Benutzt wird die von H. Diels besorgte Ausgabe (Berlin 1893).

nen in verschiedener Weise Verdauungsstörungen hervorgerufen werden, die in der Bildung von Rückständen (*perissômata*) resultieren. Auf der nächsten Stufe dieses Prozesses steigen aus den Rückständen durch Verdampfen (*anathumiatheisai*) Winde auf, die die Krankheiten herbeiführen. Auch im Hinblick auf die *phusai* differenziert der Urheber dieser Theorie, und zwar wird von ihm ein quantitatives und ein qualitatives Kriterium eingeführt: es können (zu) viele oder zu wenige Winde sein, oder die *phusai* sind einer Veränderung in Richtung auf übermäßige Wärme oder auf übermäßige Kälte unterworfen. Hiernach rufen also die Winde, wenn sie quantitativ oder qualitativ das rechte Maß über- bzw. unterschreiten, in jedem Fall Krankheiten hervor.

Der unvoreingenommene Vergleich der Texte führt zu dem Ergebnis, daß zwischen den Fragmenten 70/71 des Praxagoras und dem Bericht über die hippokratische Lehre im Anonymus Londinensis keinerlei Berührungspunkte bestehen. Schon Kühn hatte in seiner Kritik an Steckerls Behauptung, zwischen den beiden Theorien herrsche "völlige Übereinstimmung", geltend gemacht, daß in der auf Menon zurückgehenden Darstellung nichts von *pompholuges* („Bläschen“) und in den Fragmenten des Praxagoras nichts von *perissômata* („Rückständen“) und *anathumiasis*, dem Aufsteigen der Winde durch Verdampfen der Rückstände, zu lesen sei.¹⁵ Darüber hinaus ist zu sagen: ein Bindeglied zwischen der hippokratischen Ätiologie und der des Praxagoras wäre nur dann gegeben, wenn sich dieser, wie Steckerl es zu unterstellen scheint,¹⁶ die Bläschen mit *phusai* gefüllt gedacht hätte.¹⁷ Davon kann aber nach dem Wortlaut dieser Fragmente nicht die Rede sein; zudem ist das Wort *phusa* bei Praxagoras nirgends belegt. Was den Inhalt der Bläschen betrifft, so vertritt auch Kühn noch eine zu konziliante Auffassung, indem er, Steckerl entgegenkommend, einräumt, daß sie nach der Ansicht des Praxagoras Formen von Pneuma (*pneumata*) enthalten mögen. Sind also nach unserem Ergebnis zwischen den beiden Fragmenten des Praxagoras und der hippokratischen Ätiologie nach dem Referat des Menon keine Entsprechungen zu erkennen, erübrigt es sich in unserem Zusammenhang, die Frage zu erörtern, inwieweit dieser Bericht

¹⁵ Siehe Kühn (1962) 135.

¹⁶ Siehe oben, Anm. 10.

¹⁷ Offensichtlich unter dem Einfluß von Steckerl spricht Capriglione (1983) 55 mit Bezug auf die Fragmente 70/71, ohne daß die Texte dafür einen Anhaltspunkt bieten, direkt von der Bildung "di 'bolle di aria' (φύσαι)".

Gedankengut, das im Corpus Hippocraticum, speziell in dem Traktat *De flatibus*, nachweisbar ist, angemessen reflektiert.

Nur einige Worte sollen auch der hippokratischen Schrift *Über die alte Heilkunst (De prisca medicina)* gelten. Denn nach der Meinung Steckerls findet sich in dieser Abhandlung¹⁸ ein Berührungspunkt, der die Nähe des Praxagoras zum Corpus Hippocraticum erweist.¹⁹ Nach Aussage des Textes entstehen im Körper Wind (*phusa*) und mit Blähungen verbundene Koliken, wobei die *phusa* durch das Aufprallen auf breite und wegen ihrer Struktur und Konsistenz besonders empfindliche Organe, zu denen die Leber gehört, sehr heftige Schmerzen in dichter Folge, Eiteransammlungen und Schwellungen verursacht. Die pathologischen Erscheinungen beruhen hierbei auf dem mechanischen Druck, den die *phusa* auf diese Organe ausübt. Da auch in diesem Fall die *phusa* das einzige verbindende Glied zwischen hippokratischen Vorstellungen und den erörterten Fragmenten des Praxagoras wäre, das Phänomen *phusa* in den Fragmenten selbst aber nicht vorkommt, entfällt die Schrift *De prisca medicina* als Zeugnis für das enge Verhältnis des Praxagoras zur hippokratischen Schriftensammlung.

Die negativen Resultate, die sich bisher abgezeichnet haben, fordern zu weiteren Überlegungen heraus. Sie können sich nur darauf beziehen, inwieweit zum Gegenstand 'Epilepsie' im Corpus Hippocraticum Vorstellungen bezeugt sind, die sich mit denen des Praxagoras (Fragm. 70) berühren. Denn zum Thema 'Verzückung' (*entheastikon pathos*, Prax., Fragn. 71) liegen in den hippokratischen Texten keine Zeugnisse vor.²⁰ Die einzige Abhandlung des Corpus Hippocraticum, deren Prüfung in unserem Zusammenhang einen gewissen Erfolg verspricht, ist die Schrift *Über die heilige Krankheit (De morbo sacro)*.²¹ Es sei voraus-

¹⁸ Hp., *Vet. med.* 22,7 f. (S. 54,6–21 Heiberg; S. 151,7–152,13 Jouanna; 1, 630,6–634,1 L.).

¹⁹ So Steckerl (1958) 41 f. Siehe hierzu die begründete Kritik von Kühn (1962) 137, der Steckerls Versuch zurückweist, „die Vorläufer der praxagoreischen Pneumalehre“ schon in dieser Schrift ausfindig zu machen. Ohne es zu sagen, greift Thivel (2001) 207 f. diese abwegige These Steckerls wieder auf, wenn er die Bläschen bei Praxagoras mit den Luftansammlungen („poches d'air“) im Körper in Verbindung bringt, von denen in manchen Texten des Corpus Hippocraticum, darunter in *De prisca medicina* 22, die Rede ist.

²⁰ Der Anonymus Parisinus, die Quelle des Fragments 71, weist seinerseits ausdrücklich darauf hin, daß „von den alten (Ärzten, sc. Hippokrates, Diokles, Praxagoras und Erasistratos)“ allein Praxagoras diese Krankheit kurz erwähnt habe.

²¹ Die Ätiologie der Epilepsie in *De flatibus* ist mit der des Praxagoras in keiner

geschickt, daß auch hier nur in einigen Grundvorstellungen Ähnlichkeiten mit dem Konzept des Praxagoras gegeben sind.

Nach Praxagoras wird die Epilepsie durch schleimige Säfte verursacht, deren Vorhandensein an sich noch keine Anomalität bedeutet. Den Ausführungen in *De morbo sacro* zufolge sind von der 'heiligen Krankheit' solche Menschen betroffen, bei denen konstitutionsbedingt der Schleim gegenüber der Galle das Übergewicht hat.²² Praxagoras vertrat die Auffassung, die schleimigen Säfte ballen sich in der Aorta, einem zentralen Abschnitt des Gefäßsystems, zusammen und bewirken dadurch eine Blockade dieses Gefäßes. Nach der Darstellung in *De morbo sacro* kann es dazu kommen, daß der Schleim (vom Gehirn herab) in die Adern (*phlebes*) gelangt und diese blockiert;²³ auch hier ist das Gefäßsystem betroffen, bei dem jedoch noch nicht wie bei Praxagoras zwischen Venen und Arterien differenziert wird. Unterbunden wird nach der Ätiologie des Praxagoras der Durchgang des vom Herzen ausgehenden Seelenpneumas, das man sich entsprechend dem physiologischen System dieses Arztes als Träger der willkürlichen Bewegung (*kata prohairesin kinêsis*) vorzustellen hat, die dem Körper durch dieses Pneuma zugeleitet wird.²⁴ Das Seelenpneuma selbst wird durch die Atmung regeneriert.²⁵ Der Autor der Abhandlung *Über die heilige Krankheit* denkt sich den Sachverhalt wie folgt: Durch die Blockade der Adern werden diese von der Atemluft (*aêr*) abgeschnitten.²⁶ Die Adern sind aber die Leitungsbahnen der Atemluft (*pneuma*, *aêr*),²⁷ und die in die Adern eindringende und von ihnen weitergeleitete Luft schafft das Bewußtsein (*phronêsis*) und ermöglicht den Gliedern die Bewegung (*kinêsis*).²⁸ Im Vergleich mit dem Verfasser dieser Schrift, der mit dem Wort *pneuma* die Atemluft

Beziehung vereinbar. Hiernach ist die übermäßige Anreicherung des in den Adern fließenden Blutes mit Atemluft (*pneuma*, *aêr*) die Ursache der Krankheit; s. Hp., *Flat.* 14,4–7 (S. 100,18–101,15 Heiberg; S. 122,16–124,10 Jouanna; 6,112,13–114,12 L.); zu den unterschiedlichen Auffassungen in *De flatibus* und in *De morbo sacro* s. Jouanna (1988) 34–37.

²² Hp., *Morb. Sacr.* 2,6; 5,1 (S. 68,18; 70,47 Grensemann; 6,366,1; 368,10 f. L.).

²³ Ebd. 7,3. 7 (S. 72,81 f. 91 f. Grensemann; 6,372,11. 22 L.).

²⁴ Siehe Prax., *Fragm.* 75 (S. 82 Steckerl).

²⁵ Siehe Prax., *Fragm.* 32 (S. 66 f. Steckerl).

²⁶ Hp., *Morb. Sacr.* 7,7. 9 (S. 72,91 f. 2 Grensemann; 6,372,22 f.; 374,4 L.).

²⁷ Ebd. 4,1 (S. 68,40–70,42 Grensemann; 6,368,1–3 L.).

²⁸ Ebd. 7,6 (S. 72,89–91 Grensemann; 6,372,19–21 L.). Zu der in *De morbo sacro* vertretenen Auffassung von der Atemluft als dem Vermittler des Bewußtseins und der zielgerichteten Bewegungen s. Gundert (2000) 21 f.

bezeichnet, hat Praxagoras, wie auch das Fragment 70 erkennen läßt, offenkundig bereits eine differenziertere Anschauung vom Pneuma gehabt.²⁹

Aus dem Nachweis der Entsprechungen in beiden Texten, die im wesentlichen die durch den Schleim bewirkte Blockade der Adern betreffen, darf nun keineswegs gefolgert werden, Praxagoras habe einzelne Komponenten seiner Physiologie und Krankheitslehre der Abhandlung *Über die heilige Krankheit* entlehnt. Dazu sind die Unterschiede insgesamt zu erheblich. Daß aber hier wie dort mit vergleichbaren Grundvorstellungen operiert wird, ist ein auffälliger Sachverhalt, aus dem abgeleitet werden kann, daß sowohl der Hippokratiker als auch Praxagoras in ein gemeinsames, größeres Netz von Beziehungen eingebunden waren, dessen Verbindungsfäden im einzelnen von uns nicht mehr verfolgt werden können, weil die Überlieferung zu bruchstückhaft ist. Auch in diesem Sinne hat 'Hippokrates' in einem Kontext gestanden.

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²⁹ Ob allerdings schon Praxagoras selbst, wie es der Anonymus Parisinus unterstellt, den Terminus „Seelenpneuma“ verwendet hat, ist fraglich (so auch Temkin [1994] 56); vgl. van der Eijk (1999) 320 zu der ebenfalls anachronistisch anmutenden Inanspruchnahme dieses Ausdrucks für Diokles.

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THEOPHRASTUS' BIOLOGICAL OPUSCULA AND THE HIPPOCRATIC CORPUS: A CRITICAL DIALOGUE?

Armelle Debru

Summary

Recent work on Theophrastus' biological opuscula opens new perspectives on the still obscure relations between this author and the Hippocratic writings. The three short treatises On Fatigue, On Sweat, On Dizziness, present unquestionable resemblances with many Hippocratic notions, but still more differences from them. This suggests a possible critical dialogue, using allusions to, and substitutions from, certain Hippocratic writings such as Regimen. Reading such writings in the light of the Theophrastean material reveals in them such important themes as differences and causes, which coincide with Theophrastus' own epistemological interests and which may have played some role in his research.

Recent scholarship on the works of Theophrastus, Aristotle's brilliant successor as head of the Peripatetic school, has provided opportunities to study some of his works known as opuscula.¹ According to the catalogue of Diogenes Laertius, several of these were devoted to biological subjects.² Among them, only three remain in manuscripts: *On Sweat* (περὶ ἰδρώτων, *De sudore*, henceforth *Sud.*), *On Fatigue* (περὶ κόπων, *De lassitudine*, henceforth *Lass.*), *On Dizziness* (περὶ ἰλίγγων, *De vertigine*, henceforth *Vert.*).³ The relation of these biological texts with the medical tradition has begun to be explored, and deserves further exploration.⁴

¹ See Fortenbaugh and Wöhrle (2002).

² *On Secretions, On Epilepsy, On Sweats, On Dizziness, On Fainting, On Fatigue, On Plagues, On Melancholy, On Paralysis, On Derangement, On Respiration, On Choking, On Hair.* On the singular or plural of the titles cf. White (2002) 24–27.

³ These were published by F. Wimmer in 1866. Since this Colloquium, a new edition has been published by William W. Fortenbaugh, Robert W. Sharples and Michael G. Sollenberger (2003). I refer to the pages of this edition by FSS.

⁴ On the medical tradition see the contributions of R.A.H. King, A. Roselli, S. Vogt and A. Debru in Fortenbaugh and Wöhrle (2002).

The theme of the present Colloque gives us the opportunity to bring this Theophrastean material into the field of Hippocratic studies. There are many reasons for doing this. The subjects and themes of these opuscula are somewhat familiar in the field of ancient Greek medicine: fatigue, sweat and dizziness are known to Hippocratic authors, even if the place of these notions and their explanations differ from that of Theophrastus. Next, it would be useful to try to detect, if not direct knowledge, at least some kind of familiarity with some of the Hippocratic writings and an echo of them; this would help to enrich our knowledge of the period of Aristotle and his circle, as has been done recently for other authors.⁵ But this aim is problematic. A special reason for Theophrastus is that the pseudo-Aristotelian *Problemata*, which incorporate much of the Theophrastean material and are widely known, do not help us to get a fresh look at these texts.

For this reason we have decided not to refer at all to this work, although doing so was sometimes very tempting and almost unavoidable.⁶ The second reason is that the date of most Hippocratic writings is uncertain and, furthermore, they have no unity of doctrine between them.⁷ Third, the question of influence, in a context of uncertainty, is now considered to be extremely problematic. Not only is our terminology of reminiscence and borrowings not “fine-grained enough”,⁸ but the notion itself of influence has a wide range of forms and degrees. This is the reason why we will limit ourselves to investigating some similarities and differences between these three opuscula and some Hippocratic writings in relation to the same subjects. After this, we will try to go further by looking for possibilities not of a static but of a dynamic relationship, a kind of critical dialogue with Hippocratic interpretations. Then we will turn back to some aspects which might possibly have attracted Theophrastus as a ‘reader’ of Hippocratic medical literature.

⁵ As I. Garofalo has done for *Anonymus Parisinus* (1997) and P.J. van der Eijk (2000 and 2001) for Diocles of Carystus.

⁶ Compare for example Theophrastus, *Sud.* and Pseudo-Aristotle, *Problemata* 1.2; cf. Fortenbaugh (2003) 12–16.

⁷ See van der Eijk (2001) xxxiii: “... the possibility that Diocles knew at least some Hippocratic writings is in itself quite plausible. Yet since the dates of most Hippocratic writings are themselves the subject of considerable uncertainty, this, too, does not give any definitive clues.”

⁸ As expressed by Hans Baltussen (2002) 41; see also on this question van der Eijk (2001) xxxiv ff.

Before considering the similarities and differences they display to Hippocratic conceptions—if we can use this very approximate expression—let us just have a rapid overview of the three opuscula. *On Fatigue* and *On Sweat* begin with questions about the origins and the reasons of the variations of the phenomena: “In what part or parts does fatigue primarily occur?”⁹ “Does sweat occur straightaway with moisture when it is secreted, or with breath since it passes through the flesh and then on the outside becomes thick and condensed through cooling?”¹⁰ The treatise *On Sweat* immediately turns to the qualities of sweat (taste, odour etc.), and to their general explanation. Only the treatise *On Dizziness* begins directly with a theory on the causes of this affection: the entrance of pneuma or moisture in the region of the brain and the trouble that results. In all these treatises Theophrastus uses causes to explain more specific problems, sometimes strange or paradoxical phenomena; for instance, in *On Fatigue*, why people are affected by fatigue in doing this or that such as in walking up or down, on flat or hollow surfaces, during short or long walks etc.; in *On Sweat*, the second section essentially concerns the different exercises and their effect on sweating: why do people sweat more after exerting themselves and in the shade than in the sun? Why more on the upper parts of the body? etc.; and the outline of *On Dizziness* is the same. After his general explanation, Theophrastus considers particular cases: “We must try and refer to these the reasons from which the particular occurrences come about concerning which people are perplexed” (*On Dizziness* 3)—for example, why do people who walk around in a circle become giddy, and especially if the circle is small, and more if one runs etc. Each fact receives a specific explanation.

SIMILARITIES

On the whole, the physio-pathological notions involved in the explanations are close to Hippocratic notions: heat, influx of moisture (*hugron*), pneuma, digestion (coction), role of exercise, colliquation (or colliquescence; *suntêxis*) etc. Moisture for instance, whatever its matter

⁹ Theophrastus, *Lass.* 1, p. 264.1 FSS.

¹⁰ Thphr. *Sud.* 1, p. 24.1–3 FSS.

and origin—as a natural condition of the body or as a result of a colligation—is central in the explanation of many phenomena. It appears as one of the main causes of fatigue: “to speak simply, (fatigue occurs) in the joined parts especially and the most sinewy ones, whenever some colliquescence comes to the sinews and the joints . . .”¹¹ Even if it is not true in general, this symptom is very often connected with an influx of moisture, by which the body or a part of it is “weighed down”.¹² For Theophrastus, several circumstances, like movement and effort (*ponos*), help this production. Such a theory of the influx of fluids as being connected with the symptom of fatigue is to be found in the Hippocratic *De locis in homine*, similarly related to the symptom of fatigue. As A. Roselli reminds us, one of the fluxes descending from the head goes to the chest and causes, among other symptoms, a severe fatigue (*kopos ischuros*).¹³ In another passage of that treatise (27), fatigue is also mentioned in relation to an excess of phlegm impregnating the flesh.

But, in the Hippocratic writings, the link between fatigue, heat and colligation of moisture is mainly to be found in the *Regimen*, where a whole chapter of the second book is devoted to its varieties (*eidea*), properties (*dunameis*) and treatment (2.66). For the author of the *Regimen*, fatigue is due to excessive colliquescence of the flesh when they are humid. What provokes this melting is a violent effort. Untrained people whose flesh naturally is moist undergo a considerable melting, as the body grows warm. Similar symptoms are experienced by those who, when out of training, suddenly take violent exercise, causing a copious melting of their flesh. For this author, the main cause of fatigue is thus an excess of moisture arising from the melting (*suntêxis*) of the body’s normal moisture—a theory developed in the first book. Here it is the main cause of fatigue, whereas in *Sweat* it is just one of them.

According to Theophrastus, sweating is generally related to a good or bad digestion of food (coction) and to the general condition of the body (*euexia*, *kachexia*). It is also determined by moisture, breath (*pneuma*) and heat: ‘why men sweat more also on the upper (parts of the body) is in a way clear. For here there is more of the mois-

¹¹ Thphr. *Lass.* 3, p. 264.21–23 FSS.

¹² Thphr. *Lass.* 5, p. 266.42 FSS.

¹³ Roselli (2002) 125–127.

ture, and the breath and the heat from which and through which sweat occurs.¹⁴ Sweat also results from a liquefaction due in part to the intensification of effort. The trainer Diotimus is cited as the author of statements about the varieties of sweats caused by exercise and the alteration of the body. In the Hippocratic Corpus sweat is also generally connected with moisture. This matter comes either from the natural moisture of the flesh or from liquefied humours: phlegm and bile in *Diseases* 1.25, from all humours in *Diseases* 4.45; from the blood liquefied by heat in *Breaths* 8. In this last treatise, the blood in question produces pneuma, which condenses and goes out through the pores of the skin.¹⁵ According to *Regimen* 2.66, sweat is simply produced by the liquefaction of the flesh under certain circumstances. Exercises and efforts, heating the body, contribute to this secretion, which in turn dries the body: 'all sweats on their departure both dry and reduce, as the moisture of the body leaves it.'¹⁶ A good functioning of this exhalation ensures a minimum of pain in the part of the body emptied 'contrary to nature'. This is not the case if this substance, not 'congenial' but 'hostile' (*polemon*) to the body, remains inside.

Moisture and another Hippocratic notion, pneuma, are responsible for dizziness in Theophrastus' treatise: '(Cases of) dizziness come about when either an alien breath (*pneuma*) or a fluidity from residue moves around the head; from certain types of nourishment, for example either wine or any other juice; or, thirdly, when someone moves his head round in a circle.'¹⁷ In the Hippocratic *On the Sacred Disease* it is also said that, when the brain is too humid because of an excess of phlegm or another fluid, it is shaken. This happens when 'the brain is corroded by phlegm and melts, and the part which melts becomes water surrounding the brain outside and flooding it'.¹⁸ In

¹⁴ Thphr. *Sud.* 24, p. 38.163–165 FSS. In relation to sleep, *ibid.*, 40 (p. 48.249–250 FSS): "As a result of both of these (i.e. moisture and heat) sweat (occurs), as has been said often."

¹⁵ On Hippocratic theories of sweat see Debru (1996) 187–190; for Diocles and the important discussion about the natural or pathological character of sweat see Fr. 30 a–d and commentary in van der Eijk (2000) 60–65 and (2001) 58–63.

¹⁶ Hippocrates, *Regimen* 2.58.1 (p. 59.14–15 Joly = 6.572 L).

¹⁷ Thphr. *Vert.* 1, p. 184.1–4 FSS. Dizziness is also associated with darkness and called *skotos*, patients *skotōmatikoi*. Its cause, signs and therapy are mentioned by the *Anonymus Parisinus*, cf. Garofalo (1997) 110–112 (with references to other authors).

¹⁸ *On the Sacred Disease* 11 (p. 22.5–8 Jouanna = 6.382 L).

Theophrastus, however, the movement of intracranial fluids is normal, and becomes pathological only with the intrusion of an alien pneuma or an excess of influx.¹⁹ For S. Vogt, these two examples show that Theophrastus adopts common physiological conceptions, when he speaks about influx of pneuma or about moisture in the brain as causes of dizziness.²⁰ Several other Theophrastean notions can already be found in the Hippocratic Corpus. The notion of digestion as coction, helped by innate heat, is important in *On Sweat*. Coction appears in *Ancient Medicine* as the activity of the stomach: 'such stomachs concoct (*pessousi*) much more slowly than others.'²¹ But it is also true that this notion was especially developed by Aristotle. In *On Sweat*, the lack of concoction (*apepsia*) is the fundamental cause of the phenomenon under discussion, since sweat is mainly produced by residues of undigested food. The relationship between insomnia and lack of coction, noted in *Fatigue* 4, where it is said that 'sleeplessness prevents digestion', is close to the one found in the Hippocratic *Regimen in Acute Diseases* 49: 'Obstinate sleeplessness makes food and drink less digestible';²² it is explained in *On Sweat*: 'Both the food is unconcocted and men go sleepless, they sweat more easily because it happens that concoction distributes moisture and sleep thoroughly concocts.'²³

Beside these global similarities, some details seem to reveal a more direct contact with the Hippocratic Corpus. For example, in *On Fatigue* (7) Theophrastus mentions the case of dry fatigue. In the final part of *Regimen* 2.66, the well trained people subjected to excessive efforts may suffer from this symptom: "as their bodies are not moist, if the effort is excessive, fatigue will be induced, as a result of excessive desiccation of the flesh. Since there is no fluid the flesh heats up and suffers, and is traversed by shivers to the point where a more

¹⁹ According to S. Vogt (2002) 149: 'Eine ähnliche Verbindung zwischen dem Einfluss von Feuchtigkeit und der Bewegung im Kopfinnen wie der Verfasser von *De morbo sacro* stellt Theophrastus in *De vertigine* her- mit dem Unterschied, dass dieser von einer natürlichen Eigenbewegung der Hirnströmungen ausgeht . . . während in *De morbo sacro* völlige Unbewegtheit der gesunde Normalzustand ist.'

²⁰ *Ibid.*, p. 150: 'Diese beiden Beispiele . . . zeigen, dass Theophrast auf geläufige physiologische Darstellungen zurückgreift, wenn er vom Einfluss von Pneuma oder Feuchtigkeit auf den Kopf als Ursache von Schwindel spricht.'

²¹ *Ancient Medicine* 11 (p. 20 Jouanna = 1.594 L).

²² *Regimen in Acute Diseases* 49.1 (p. 57 Joly = 2.330–332 L).

²³ Thphr. *Sud.* 20 (p. 36.138–140 FSS). On sleep and coction see Aristotle, *On Sleep* 3, 456 a 30 ff.

prolonged fever is induced".²⁴ What is common between Theophrastus and the Hippocratic writer is that 'the two opposite starting conditions, having or not having had practice in physical exercise, may produce *kopoi* that led to fever even though they derive from opposite states (excess of fluids in untrained people or excess of dryness in well trained ones)."²⁵ Another detail is the remark, in the treatise *On Sweat*, that 'after periods of running and exertion, men sweat more in the shade than in the sun because the sun dries up (moisture) and closes the pores';²⁶ this effect reminds us of *Airs, Waters, Places*, where the author says that the sun raises the finest and lightest part of the juices, adding that, when a man has come into a shady place, his whole body sweats alike as the sun no longer shines upon it, and so the sweat is prevented from disappearing through the sun's power, as it is also the case when the body is covered.²⁷

In general, Theophrastus' account does not differ from common physiological conceptions. Hence, even if we find a sign of familiarity with some Hippocratic conceptions, we have no possibility to conclude that there was a direct influence.

DIFFERENCES

In spite of these similarities, however, the differences are more striking. Theophrastus rarely mentions pathological facts, which are the main topics of the Hippocratic Corpus. For example, with the exception of the *Regimen*, fatigue (*kopos*) is constantly mentioned among pathological symptoms, often in relation to fever. Dizziness also always appears associated with other pathological symptoms, such as headache, dizziness, apoplexy etc. In the *Aphorisms*, for example, it is said that the wind *notios* 'relaxes and moistens the body, brings on heaviness on the head, hardness of hearing and dizziness, makes the eyes and the whole body slow to move, and the bowels watery'.²⁸ On the other hand, Theophrastus makes large use of non-Hippocratic,

²⁴ Hp. *Vict.* 2.66 (6.586 L).

²⁵ Roselli (2002) 30.

²⁶ Thphr. *Sud.* 27, p. 42.180–182 FSS.

²⁷ *Airs, Waters, Places* (*De aere, aquis, locis*; henceforth *Aer.*) 8.4 (p. 205.11–13 Jouanna = 2.34 L).

²⁸ *Aphorisms* (*Aphorismi*; henceforth *Aph.*) 3.17 (4.494 L), 3.31 (4.500 L).

sometimes evidently Aristotelian concepts. The most important is the notion of residues (*perittômata*) which plays a major role in his explanations of sweat. According to him, sweat comes from the liquefaction of residues, aggravated by a bad condition of the body (*kachexia*): 'For on account of the impurity of the body, the motion, which is additional and a source of heat, causes the residues to exude together with the sweat . . .'.²⁹

Only what is foreign to the nature of flesh is secreted, whereas the sweetest and lightest is consumed (*On Sweat* 2).³⁰ These residues come from unconcocted food, which causes an excess of moisture: 'those who are in bad condition and have unconcocted food sweat easily because of the quantity of moisture . . .'.³¹ This origin explains such qualities as the saltiness of sweat, its odour, and its quantity and mode of secretion according to ages. For instance, since, in young children, residues are secreted through the intestines, and because their skins are dense, young children do not sweat much, although they are hot and humid by nature (*On Sweat* 19). Old people do not sweat either, for opposite reasons. On the whole, this doctrine of digestion as the source of sweat appears largely as post-Hippocratic.³²

There are other differences, which we can summarise in the following types:

The first is that the form of monographs devoted to biological subjects does not exist in the Hippocratic Corpus as it has been transmitted to us. For example, the treatise *On Fatigue* 'is the only known text prior to Galen to isolate the phenomenon of fatigue, providing a treatment of the subject per se. All other texts include this issue within the broader framework of their subject as occurs in the Hippocratic treatise *De locis in homine* and *De victu* or marginally as far as we know in Erasistratus'.³³ Theophrastus was also probably the first to devote a special study to sweat, and perhaps to dizziness, fainting and paralysis. But he was not of course the first to write such monographs. Diocles had already devoted a special

²⁹ Thphr. *Sud.* 13 (p. 30.83–85 FSS).

³⁰ Aristotle, *Generation of Animals* 4.8; 776 a 28–30; cf. Debru (2002) 167–169.

³¹ Thphr. *Sud.* 22 (p. 38.150–151 FSS).

³² On this doctrine in *Anonymus Londinensis*, cf. Manetti (1999) 101.

³³ Roselli (2002) 123.

book to anatomy, others to physiological subjects like digestion (*Peri pepseôs*)—as probably did Aristotle himself.³⁴

Second, there are few mentionings of pathological facts, with the exception of the development on ulcerous fatigue at *On Sweat* 13: 'Moreover, on account of this some men have ulcers, when they have overly exerted themselves. For, on account of the impurity of the body, the motion which is additional and a source of heat causes the residues to exude together with the sweat, if (the process goes) well; but when (the residues) are thick and contain bad juices, like (those which are) acidic and salty and bitter, (then the residues) cannot be secreted on account of the quantity, but rise up and cause the flesh to ulcerate on account of the bitterness of the juice.'³⁵ In the *De plenitudine*, Galen tackles again this question. For him, exercise and movement help to expel the residues together with the sweat. If these residues are acrid or salty, they cannot be secreted but go up towards the skin and ulcerate it. Such an idea is already to be found in *Epidemics* 2.1.7 about deposits (*apostasies*) made by sweat; and the same goes for the tumours (*phumata*) formed under the skin as scrofulous tumours, eruptions etc. But the only case directly correlated with pathology in Theophrastus indicates also the treatment.

Third, Theophrastus' vocabulary is more often Aristotelian than Hippocratic. For instance, *alloiôsis* is unknown to the Hippocratics (*On Sweat* 10 and 11). Whereas *pepsis* can be found in the Hippocratic Corpus (14), Theophrastus' notion of *aepsia* (lack of digestion) is represented only once in the Hippocratic Corpus by the corresponding noun; other rarely Hippocratic or not Hippocratic words include *kachexia*,³⁶ *sunexikmazein*, *euidrôtes* and *dusidrôtes* etc.

Style creates another important difference. The *Problemata* have made us familiar with the systematic questioning such as to where, when, how, whether, followed by multiple choice: 'or because or because', which is also very typical of Theophrastus. This style contrasts with the often strong assertoric style of Hippocratic authors. About fatigue, for example, the author of *Regimen* announces straight off that 'it goes like that' (*hôte echei*). With the same confidence, the

³⁴ On Diocles' list of works see van der Eijk (2000), Fr. 17 and 34, with comments (2001).

³⁵ Thphr. *Sud.* 13 (pp. 30.83–32.89 FSS).

³⁶ Only at Hp. *Aph.* 3.31.3.

author of *Diseases I* states that sweat ‘appears for this reason’ (*gine-tai dia tode*) (25).

But the most spectacular difference between Theophrastus and the Hippocratic treatment of the same subject concerns epistemology. Theophrastus is endowed with an acute epistemological awareness—a feature that manifests itself by many explicit statements.³⁷ One of his favourite means is to raise a paradox, like: ‘this is strange (*atopon*)’ (*On Dizziness* 9), or to point out a contradiction like: ‘it would seem odd and as it were contrary if those who exercise themselves and are in good condition sweat easily, and again those who are non-exercisers and are in bad condition (sweat easily) . . .’ (*On Sweat* 22). Finally, the knowledge of differences in facts and causes helps to solve the problem: ‘But it is not odd (*atopon*), since men sweat neither from the same (causes) nor in the same way’.³⁸ His method of extending knowledge by using systematic differences, paradoxes etc. is strongly related to the theoretical programme elaborated in his *Metaphysics*, whereas there can be found no such systematic reflection but just casual remarks on knowledge in the Hippocratic Corpus. This kind of reasoning appears as a systematic way to break up a straightforward discourse.³⁹ For all these reasons, the differences in the treatment of common subjects by Theophrastus and the authors of the Corpus seem largely to take over the similarities or the echoes, such as the ones we have shown.

A CRITICAL DIALOGUE?

Nevertheless, it may be suggested that there is some reference to Hippocratic doctrine in Theophrastus. But this reference has to be seen as a critical relation, a kind of critical dialogue. This relation consists of several methods which can be reduced to a double critical procedure: one consists in undermining Hippocratic theories; the

³⁷ On Theophrastus’ methods see Wöhrle (1985) and Debru (2002) 170–174.

³⁸ Thphr. *Sud.* 22, p. 38.151–152 FSS.

³⁹ For example in this passage, *On Dizziness* 9 (p. 192.69–72 FSS): ‘Giddiness also comes about when people look continuously at the same thing and fix their gaze on it; and this raises a problem why, if the same experience comes about when the sight is moved in a circle, it does so also when it is at rest. For it is strange that (the effect) should be produced by opposite things.’

second one, in substituting new categories and concepts. To remain vague or even silent upon Hippocratic theories seems to be a good way to undermine them. For example, Hippocratic writings give details about the process and substances of colliquescence (*suntêxis*). For the author of *Regimen*, this phenomenon affects the flesh in case of violent efforts, so that *suntêxis* is thus generally determined by the word flesh.⁴⁰ By contrast, Theophrastus, who uses this notion as well, hardly says what the matter is: moisture in the flesh, the flesh itself, or only residues? As stated by A. Roselli, in none of these cases where he uses the word *suntêxis* does Theophrastus specify which part or material component of the body gives rise to liquefaction and produces this type of *perittôma*.⁴¹ Only once, in *On Sweat*, does the expression of 'flesh being melted' appear, but only as included in the *doxa* of the trainer Diotimus. The same silence affects the cause of *suntêxis*. Where the Hippocratic author of the *Regimen* evokes heat or effort,⁴² Theophrastus eliminates the role of these factors (*On Fatigue* 3–5), introducing movement as a fundamental element, leaving the contribution of both factors unclear. Worse, at the beginning of *On Sweat*, Theophrastus recalls different Hippocratic theories about the formation of sweat, just to dismiss the discussion and delay it to a *heteros logos*. However, he obviously has a good knowledge of these theories. One of them claims that sweat is a moisture coming out of the body directly. This is the idea of the *Regimen*: 'the collected moisture, being warm, is thinned and forced outwards from the flesh to the skin and is called hot sweat' (2.66). But this expulsion of moisture can be done as a vapour (literally: 'with pneuma'), either with or without condensation, as in *Breaths*.⁴³ On the other hand, Theophrastus constantly adds other circumstances and causes for the same phenomena.

Another means used by Theophrastus to undermine Hippocratic conceptions is to stress their failure to provide a comprehensive

⁴⁰ *Vict.* 2.59; 2.62; 3.78. The word flesh (*sarx*) is also subject of the verb *suntêkein*.

⁴¹ Roselli (2002) 128.

⁴² For example *Vict.* 2.66.2 (p. 66.11–14 Joly = 6.582 L): 'Untrained people, whose flesh is moist, undergo much colliquescence after exercise, as the body becomes warm.'

⁴³ *Breaths* 8.5–6 (pp. 114–115 Jouanna = 6.102–104 L): 'as the pneuma strikes the channels of the body, sweat is formed. For the breath, when it condenses, flows as water, and going through the channels passes on to the surface just as steam rising from boiling water... thickens and condenses.'

account of the link between cause and effect; for example, the link between fatigue and normal or pathological moisture. *Suntêxis* is not the only cause of fatigue, he says, and it is *not always* the cause. Dry bodies also feel fatigue, unless ‘someone should say that colliquescence is present in these parts’.⁴⁴ If it comes from moisture, fatigue is *not always* related to *ponos* but also to plethora, insomnia, or catarrh (or other reasons) and to immobility. If it is related to effort, it does not come from *all kind* of effort. There are many exceptions, counterexamples of a theory which may be said to be ‘Hippocratic’: ‘not for all, not all the time’ (οὐχ ἅπασι δὲ οὐδὲ πάντως). The multiplicity of causes, even contradictory, is imaginable: ‘Does anything prevent fatigue from occurring on account of several causes?’

A third means is to stress the contradiction between the Hippocratic theory and proposed therapy. For example, Theophrastus says that ‘the treatments would seem somehow to be opposite, both of the affections and to themselves, like that which thoroughly moistens by both baths and drinks, if indeed the affection consists in moisture and colliquescence’.⁴⁵ Such a judgement seems to allude to the author of the *Regimen*, who, in the case of untrained people affected by fatigue, as in many other cases, gives the therapeutic recommendation to treat bodies by hot baths when they suffer from excess of colliquation: ‘Break up the collected humour by vapour baths and by hot baths.’⁴⁶ Thus the criticism is directly expressed against a treatment which seems to be contradictory. The same kind of criticism was expressed a little earlier against those who thought that fatigue occurs whenever the body becomes moist and weighed down. For ‘it is not in general’, since ‘it happens more or less to everyone during wet weather’ (*Fatigue* 5).

This leads us to what seems to be a kind of dialogue based on the systematic use of substitution. Even if there are several kinds of substitutions between the Hippocratic Corpus and Theophrastus—of categories, questions or of methods—the most important one is the conceptual substitution. Many Hippocratic patho-physiological notions are thus systematically replaced by physical ones. For instance, the general notion of *ponos* is familiar in the Hippocratic Corpus,

⁴⁴ Thphr. *Lass.* 5 (p. 266.38–39 FSS).

⁴⁵ Thphr. *Lass.* 6 (p. 266.44–46 FSS).

⁴⁶ *Vict.* 2.66.4 (p. 67.12–13 Joly = 6.584 L).

where it covers not only exercise but effort, suffering etc. It is also a favourite word of the author of the *Regimen* (who uses it no less than ten times in the chapter devoted to fatigue). In the same context, Theophrastus often replaces *ponos* by *kinêsis*⁴⁷—physical movement, not alteration.⁴⁸ This explains why the parts of the body, especially those designed for movement, are primarily involved. Thus, at the beginning of *On Fatigue*, the question is not, as in *Regimen*, what kind of bodies suffer from fatigue, but what parts of the body are involved. Neither the body (*sôma*) nor the flesh (*sarx*) are sources of fatigue, as in the Hippocratic treatise, but the limbs, the joints, even the bones (2): all the parts responsible for movements. Moreover, Theophrastus distinguishes the several parts engaged in movement: the upper and the lower part of the limbs, the thighs and the calves (10), the shoulders, the arm and the hand (13) etc. In the chapter on exercises of the arms in the *Regimen* (2.64), the arms themselves are not mentioned; nor are the legs in the one on running exercises. By contrast, in the Theophrastean opusculum, thighs and calves, shoulders and arms, hands and wrists are specifically mentioned.⁴⁹

Another important substitution concerns the meaning of heaviness. *Barutês* is a Hippocratic symptom of suffering:⁵⁰ it refers to a sensation of heaviness, tiredness. It is generally related to plethora and denotes a feeling of the patient, not an objective fact. By contrast, in Theophrastus *barutês* is generally interpreted in terms of physical weight.⁵¹ *Ponos* itself is repeatedly related to weight; it explains the effort in the movement of legs (13). If walking uphill is more tiresome than going downhill, it is because the leg must lift up the entire

⁴⁷ As noticed by Roselli (2002) 132 and n. 20, for Theophrastus *kinêsis* represents the main efficient cause of fatigue.

⁴⁸ I do not agree with R.A.H. King referring to the general meaning of this concept in Aristotle, covering all kind of change, alteration. Cf. King (2002) 117–118.

⁴⁹ As Erasistratus does, perhaps recalling this passage when speaking of legs, arms and hands becoming filled up after gymnastic exercises; cf. Roselli (2002) 133, whereas Galen adds other parts in the case of plethora.

⁵⁰ According to S. Vogt (2002) 145: 'Diese Erklärung bedient sich des physikalischen Gesetzes der Massenträgheit—nämlich der Gehirnmasse innerhalb der Hirnschale—das zwar als solches erst von Descartes entdeckt wurde . . .; das Phänomen selbst war aber in der Antike durchaus bekannt und wurde spätestens im Peripatos mehrfach präzise beschrieben, wie auch hier im Beispiel der unterschiedlichen Drehbarkeit roher und gekochter Eier.'

⁵¹ The notions of heaviness and weight are present in *Lass.* 1, 3, 4, 5, 7, 9, 11 (2), 12, 13.

body, whereas the thigh suffers from the shock in going down. The subjective expression of symptoms is explained by physical phenomena.

Strength is also interpreted as a physical concept. One question asked by Theophrastus is: 'Why are moist bodies more subject to fatigue than those which are ones not moist?'⁵² The explanation of *Regimen* correlates weakness and moisture, strength and dryness. For instance 'prolonged sleep heats and melts the flesh, dissolves the body and enfeebles it . . . Inaction moistens and weakens the body; for the soul, being at rest, does not consume the moisture out of the body. But labour dries and strengthens the body.'⁵³ Theophrastus translates the sensation in terms of forces: 'For they are weaker'; softness is interpreted as weakness, hardness as force and movement. Here mechanics tends to replace the pathology of qualities: hot and cold, wet and dry, density and rarity of flesh etc. The body is the instrument of forces at work.

Another domain of physics is the notion of pressure and elasticity related to the symptom of fatigue. Theophrastus describes a case of fatigue arising from immobility with tension—due to the blockage of an influx of fluids in the Hippocratic Corpus—as depending on the elasticity of the surface: 'what is incompressible and lacks "give" causes fatigue by crushing'.⁵⁴ Then he continues his physical explanation: after the surface has taken the weight and does not yield anymore, is the same pressure created between the body and this surface? But 'this is not true'. Things of this kind continue to be compressible. In the same direction, painful sensations due to pressure are also related to the physical form of the surfaces, flat surfaces being more tiring than hollow ones and the convex more than the flat ones (*On Fatigue* 9). The physics of elasticity will be developed after Theophrastus, as shown in the writing of Strato of Lampsacus. But the emergence of physical notions in medicine before the Alexandrian period already permits a reinterpretation of the Hippocratic tradition.

The treatise on dizziness offers another kind of reinterpretation. Here, what is a clinical symptom in the Hippocratic Corpus is reinterpreted in terms of circular movement. One aspect is developed

⁵² Thphr. *Lass.* 18 (p. 276.139 FSS).

⁵³ *Vict.* 2.60 (p. 60.15–17 and 22–23 Joly = 6.572–4 L).

⁵⁴ Thphr. *Lass.* 8 (p. 268.62–63 FSS).

in geometrical terms, another, in its physical effect on the intracranial fluids⁵⁵—which does not correspond to any of Hippocratic models. The idea of a movement of the brain is to be found in the *Sacred Disease*, but as a pathological phenomenon: 'when the brain is abnormally moist, of necessity it moves, and when it moves, neither sight nor hearing are still but we see and hear now one thing and now another . . .' (14). For Theophrastus, there is an intrinsic movement of the intracranial fluids and another one coming from outside, which can disturb the first one, when, for instance, 'it comes about that, as their sight moves in a circle, it moves the inside parts unevenly and causes disturbance'.⁵⁶ This movement is transmitted by vision to the brain: 'their sight . . . being shaken and moved in this way it disturbs and moves the inside parts'.⁵⁷ Centrifugation separates heavy and light, centre and circumference. When it stops, both are separated. Being at rest separates what is preserved when there is movement . . . 'for the things which are naturally constituted to move in this way are preserved and held together through it'.⁵⁸ So, contrary to the Hippocratic conception, what stops the circular movement of the brain's fluid causes disorder and dizziness. Continuity and coherence are maintained by the movement. In a subtle manner, all these statements could be critical reinterpretations of references to Hippocratic doctrine. As such, they appear to be very illuminating for the understanding of one of the pre-Alexandrian approaches to human physiology.

Now, as the final step of our inquiry, if we can detect a critical familiarity of Theophrastus with some aspects of the Corpus Hippocraticum, can we discover what may have been of interest for him in this literature? A first conclusion is that the treatise *Regimen*, which was widely known in antiquity, was obviously important for Theophrastus, especially the second book, whose two main themes are food and exercise, but many others too, like the production of sweat. It appears without doubt that at least the chapter on *kopoi* was

⁵⁵ According to S. Vogt (2002) 156: 'Dieses Modell verbindet zwei zu seiner Zeit bekannte Theorien: die geometrische Beschreibung des Kegels und die mechanistische Erklärung der Kreisbewegung.'

⁵⁶ Thphr. *Vert.* 7 (p. 190.60–62 FSS).

⁵⁷ Thphr. *Vert.* 8 (p. 190.65–66 FSS).

⁵⁸ Thphr. *Vert.* 9 (p. 192.177–178 FSS).

perfectly known to Theophrastus.⁵⁹ In this chapter, the two groups of trained (*gumnazomenoi*) and untrained people (*agumnastoi*) are correlated, as they are in *On Sweat* 21 (*gumnazomenoi-agumnastoi*).⁶⁰

Moreover, the author of the *Regimen* likes the mental activity of discerning (*diagignôskein*), the setting of systematic distinctions (winter-summer, natural-forced etc.) and, more interestingly, the difference between facts seen *kata pantos* and *kath' hekasta* (2.39)—which is, as we have seen at the beginning, the common structure of Theophrastus' opuscula. More generally, it appears, in the light of Theophrastean interest, that the theme of differences, although much less systematic than in Theophrastus, is extremely important in such Hippocratic writings as in *Ancient Medicine*, *Airs*, *Waters*, *Places*, *Breaths*, *Regimen in Acute Diseases* etc. Among these, *Diseases I* is of special interest for us, not only because it contains a special chapter on sweat (25), but also because the theme of differences is given a great importance: 'one body differs from another, says the author, one affection from another, and one season in which to be ill from another; some patients are more able to endure the stress of disease, while others are totally incapable of enduring'.⁶¹ A little later, one can find a kind of 'hymn' on differences: 'among persons that have these and similar diseases, a man differs from a woman in the ease or difficulty with which he recovers, a younger man differs from an old man, and a younger woman differs from an older woman . . . Besides, one affection differs from another, being either greater or less, one body from another, and one treatment from another'.⁶² Another aspect is worth considering. The treatise *Regimen*—as well as *Diseases I*—makes a very dense use of explanations. For example, 'because' (*dioti*) is one of the author's favourites adverbs, which is also the case in *Diseases I*.⁶³ Now the importance of the relationship between phenomena and their causes in Theophrastus' explanations appears to be essential in his biolog-

⁵⁹ *Ancient Medicine* 11, *Diseases*. 1.11, *Regimen in Acute Diseases*. 11, *Airs*, *Waters*, *Places*. 9, *Joints* 9 etc.

⁶⁰ Fifty per cent of the Hippocratic occurrences of *gumnastês* are in this treatise, as are five out of the seven occurrences of *agumnastês*.

⁶¹ *Morb.* 1.16 (p. 134 Potter = 6.168–170 L).

⁶² *Morb.* 1.22 (p. 154 Potter = 6.182–184 L).

⁶³ Also very frequent in *Airs*, *Waters*, *Places*, and in *On Generation*. Only once in *Sacred Disease* (17), though in a fundamental sense. Furthermore, *dia tode* is a frequently used means to achieve the same purpose.

ical opuscula.⁶⁴ Thus, we can legitimately assume that some structural features of certain Hippocratic treatises may have attracted Theophrastus as favouring his biological analytic descriptions, together with their tentative explanations.

As a conclusion, an investigation into the relationship between Theophrastus and the Hippocratic Corpus, even if it does not permit any firm result in terms of direct influence or borrowing, shows, however, that at least the treatise of *Regimen*, which has enjoyed a massive importance in the medical literature, is also present, both in the content and in method, in Theophrastus' biological opuscula (at least *On Sweat* and *On Fatigue*). The second result of this brief inquiry is that, rather than a passive borrowing, the relation with this treatise and others—as remains to be investigated—is a dynamic relationship of critical distance and transposition, substitution and reinterpretation etc. Lastly, the influence of a treatise depends on the selection of features determined by Theophrastus' own epistemological preferences. This is the case for at least two of them: the theme of *differentiae*, and the need for explanation. In a word, as reading is an interactive process, implying choice and anticipation, the process of influence and selection between Theophrastus and the Hippocratic tradition probably has to be analysed in the same dynamic way.

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⁶⁴ Theophrastus' views on this relationship are concisely expressed at *Metaphysics* 24–25 (p. 16 Laks-Most).

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PART FOUR

THE HIPPOCRATIC MEDICAL DISCOURSE IN ITS
LINGUISTIC AND RHETORICAL CONTEXT

FORM AND FUNCTION IN *PRORRHETIC* 2

Tim Stover

Summary

This essay elucidates the socio-cultural context in which the Hippocratic work Prorrhetic 2 was produced.¹ It focuses on the interaction of epideictic, didactic, and polemic modes discernible in the text, reading these as effects of its primary social function. The text draws the reader's attention to the subject-position its author occupies within the practice of medical prognosis and tries to persuade the reader, imagined as a potential pupil, to adopt this same position.² The text was produced amid the intense competition waged by teachers for students that attended the increasing specialization of knowledge in the first half of the fourth century BCE. Prorrhetic 2 is a protreptic essay, defining the proper parameters of a given technê and its author's place within it in order to persuade the reader of the superiority of his approach to the object of study.

THE TEXT'S IDEOLOGICAL INVESTMENT

Firstly, I want to establish the fundamental ideological dimensions of our text. While Lloyd is certainly correct that the *practice* of medical prognosis was generally concerned with winning a clientele of

¹ I am more interested in tracing the text's cultural mode of production than I am in "fixing" the actual date of composition. For the latter, I follow García Novo (1995) 547–548, whose work on this text is fundamental, in assigning the treatise to the first half of the fourth century BCE. Ducatillon (1977) 242–250 has cogently argued that *Prorrh.* 2 was produced by some member of the medical community in Cos. However, I disagree with Ducatillon that our author is the same individual who penned *Prognostic* (*Prognosticum*).

² I employ the terms author and reader in their precise senses, for it is quite certain that the text we possess was intended to be read. See especially *Prorrh.* 2.4 (9.20,10–11 L.) where the author actually draws a distinction between his written (*grapho*) and his oral (*lego*) remarks. See also Jouanna (1984) 29–30. For the fourth century BCE as an increasingly textual environment, see Cole (1991) 115.

patients,³ I wish to stress that *Prorrhetic* 2 aims to win over a clientele of *pupils*. This is achieved precisely by suggesting to the reader that the author's methods will offer a competitive advantage in the agonistic exchanges that took place, often in the presence of the patient, between physicians vying to win the patient's confidence. These moments of contest must have made for odd spectacle, and our text is clearly preoccupied with what we may call the "performance of prognosis" in these semi-public competitive contexts. Indeed, the author himself assimilates his role to that of a trainer preparing athletes for competition. For he says: "But anyone who desires to win such successes (τῶν τοιούτέων ἐπιθυμεί ἀγωνισμάτων) should make predictions only after learning about all these details" (*Prorrh.* 2.2 [9.10.4–6 L.]).⁴ The competitive successes referred to here concern victories against other prognosticators. And the relative subject-positions implied by this metaphor—trainer-athlete, teacher-student, author-reader—are instructive and not unique to our treatise.⁵ In fact, the author operates within an ideology of prognosis that is concerned almost exclusively with the success of the student in the contests he would have to wage with competing physicians. The text implies that the way one practices, the way one *performs* prognosis needs to be "correct" not so much for the sake of the patient, but for the sake of the physician, and equally importantly, for the sake of the practice itself and its contestation.

Our treatise nowhere mentions the importance of prognosis in *healing* the sick, nor anywhere describes how therapy might be carried out once one has successfully identified a patient's "signs". The author seems either unable or unwilling to do so, even when it appears that he might and that it would be beneficial for the reader to have this information. For example, at *Prorrhetic* 2.9 (9.28.17–18 L.), while discussing individuals seized by the "sacred disease", he says: "The physician, if he knows the method of treatment (εἰδότες τὸν τρόπον τῆς ἰήσεως), must take these cases on if the persons are young and active, unless their mind has some defect or the patient is

³ Lloyd (1979) 45, 89.

⁴ And just before this passage, in the same chapter (i.e. *Prorrh.* 2.2 [9.8,14–15 L.]), the author says: "... indeed, it is not so difficult for a person who wants to have successes of this kind (τῷ βουλομένῳ τὰ τοιάδε διαγωνίζεσθαι) to make predictions."

⁵ The pedagogical relationship whereby the teacher sees himself as the trainer of athletes is also found frequently in Isocrates, who calls his students *agonistai* (*Antidosis* 201, 204). See also *Antid.* 180–185, where Isocrates explicitly likens his role as a teacher to that of a trainer of athletes.

paralyzed.” Here, though he alludes to the fact that one might know the proper therapy, we hear nothing more about it. Rather, the author is far more concerned to warn the reader under what conditions he should and should not make an attempt at prognosis. Such moments reveal the text’s preoccupation with the success of the student (and his method) in the contests waged with other physicians, rather than in the contests waged against sickness.⁶

A comparison with the programmatic opening of *Prognostic* is instructive here. This work places great stress on the therapeutic aspects of medical prognosis. For we read:

I hold that it is an excellent thing for a physician to practice forecasting. For if he discover and declare by the side of his patients the present, the past, and the future . . . he will be the more believed to understand the cases, so that men will confidently entrust themselves to him for treatment. Furthermore, he will carry out the treatment (θεραπεύειν) best if he knows beforehand from the present symptoms what will take place later. Now to restore every patient to health is impossible. To do so indeed would have been better even than forecasting the future. But as a matter of fact men do die, some owing to the severity of the disease before they summon the physician, others expiring immediately after calling him in . . . before the physician by his art can combat each disease (πρὸς ἕκαστον νόσημα ἀνταγωνίσασθαι). It is necessary, therefore, to learn the natures of such diseases . . . For in this way one will justly win respect (θαυμάζοιτο) and be an able physician (ἡτρὸς ἀγαθός). For the longer time you plan to meet each emergency, the greater your power to save those who have a chance of recovery, while you will be blameless if you learn and declare beforehand those who will die and those who will get better. (*Prog.* 1.1 [2.110–112.11 L.])

This text emphasises the therapeutic potential of medical prognosis and gives equal weight to considerations of the patient’s health and the physician’s success and security. Tellingly, the author of *Prognostic* describes prognosis as “ammunition” for the physician’s *agon* against disease, not other doctors, as in *Prorrhetic* 2.⁷ Moreover, in language very similar to that found in *Prorrhetic* 2.2 (9.10 L.), the author of *Prognostic* suggests that successful prognoses enable one to “win respect” (θαυμάζοιτο) and be a good physician (ἡτρὸς ἀγαθός). The similar

⁶ For other examples of our author’s avoidance and/or ignorance of therapeutic practices, see *Prorrh.* 2.4 (9.18,14–18, 23–24 L.), 2.12 (9.36,4–5 L.), 2.23 (9.52,19–20 L.) and 2.38 (9.68,8–9 L.).

⁷ On the language of the *agon* employed in the *Hippocratic Corpus* to refer to the struggles waged by doctors against diseases, see von Staden (1990) 97–99.

statement in *Prorrhetic* 2.2 (9.10.10–12 L.) contains a telling omission. There the author says that his approach (i.e. a circumspect and cautious study of the *semeia*) will enable the reader to make successful prognoses and thus be admired by the patient he is attending (θαυμασθείη ὑπὸ τοῦ ξυνιόντος ἀλγέοντος). We get nothing here on therapy or on being a good physician, only mention of the admiration the reader can win if he follows the author's directives. We note too the emphasis on the presence of the patient (ξυνιόντος) at this moment of personal glory for the physician, a detail that focuses the reader's attention on the most immediate and important source for the praise of his prognostic performance. Nor does the author stress that an unsuccessful prognosis may lead to the death of a patient, as in *Prognostic*, but rather that the physician's reputation will be harmed. For he will be hated (μισεῖσθαι) and might even be considered insane (μεμηνέναι). Furthermore, we can compare a statement made in *Regimen in Acute Diseases* (*De Diaeta Acutorum*), a passage that discusses the importance of prognosis, to show that this author also (unlike ours) sees his job as supplying information useful for treating the ill. He says: "In fact, it [i.e. prognosis] has great power to bring health in all cases of sickness, preservation of health to those who are well, good condition to athletes in training, and in fact the realization of each man's desire." (2.244.3–5 L.). We get nothing even remotely similar to this expression of concern for the well being of the sick anywhere in *Prorrhetic* 2, let alone in the programmatic opening chapters (i.e. 1–4 [9.6–20 L.]).

However, in one single instance the author may be said to show some concern for the patient's *psychological* well being. At *Prorrhetic* 2.6 (9.22.22 L.), he suggests that a patient's impending doom should be reported to someone else, ostensibly sparing the patient the bad news. And yet, even this apparently sympathetic act is most likely aimed at advertising and preserving the reputation of the physician. For, as we learn from the opening of *Prognostic* cited above, if a doctor forecasts a patient's death, he can more easily escape any reproach. In addition, the physician will certainly want his successful prognosis to have been known to someone other than the unfortunate patient. The dead simply cannot be counted on to spread the word about a physician's successful prognosis.⁸ Finally, we note that the open-

⁸ On the importance of word of mouth advertisements for a prognosticator's career, see Edelstein (1967) 76–77.

ing of *Prognostic* stresses that time is of the essence when it comes to healing the sick, and that death can result if one does not see a doctor soon enough. In *Prorrhetic* 2, time is also an issue. But here the author stresses the fact that the physician ought to *wait* to make any prognoses until a disease has become settled, regardless of whether this delay may be beneficial or harmful to the patient. For this delay will help the doctor make a more certain prognosis, which will ensure *his* personal safety, while the patient's security is implicitly of secondary importance (*Prorrh.* 2.3 [9.14.2–3 L.]).⁹

Summarising our discussion thus far, we can say that our text, narrowly focused on the practice of prognosis itself, divorced from any consideration of its therapeutic advantages, was produced within a socio-cultural context in which the “performance of prognosis” had become an object of study in its own right. Further, while it is certainly important to keep in mind the intense competitions waged by prognosticators to win patients, we must also be mindful of the equally intense competition for students waged by teachers of natural philosophy and medicine in the fifth and fourth centuries BCE.¹⁰ With these considerations in mind, I propose that the author stages an *agon* with other *teachers* of medical prognosis, in order to convince his readers that by following his methods they will find success in their contests with other *practitioners* of medical prognosis.

THE TEXT'S DISCURSIVE TECHNIQUE

It is evident right from the start of *Prorrhetic* 2 that the author desires very strongly to set his own methods in stark contrast to other types of prognosis. The first four chapters of the treatise reveal the author's involvement in general issues pertaining to the theory and practice of medical prognosis, even as he distances and isolates himself from the previous approaches of his colleagues. He describes his text precisely as a response to other forms of medical prognosis. He tells us:

Concerning those physicians whose predictions are vaunted for their accuracy (ἀκρίβειαν), with some of them I have conversed directly,

⁹ Of course, this passage also underscores the author's more cautious approach to prognosis in general, in contrast to the speedy (and yet completely accurate) prognoses reportedly made by the physicians criticized in the opening chapter.

¹⁰ On which see Lloyd (1987) 100 ff. and Dean-Jones (2003).

others I know through having spoken with their children and students, and of others I have acquired the writings so that, knowing full well what sort of thing each of them was thinking, but still not finding any of the reputed accuracies (ἀκριβείας) anywhere, I have set to work to give a written account of the matter. (*Prorrh.* 2.4 [9.20.11–15 L.])

This passage functions to “authorise” the author’s voice within the field of medical prognosis, largely by presenting his own more skeptical and humble approach as the result of a great deal of “research”. The author suggests here that the tradition as it stands needs to be revised, rewritten. This revision places the author, tellingly, in the role of teacher-writer, as he challenges the theories and practices of other teacher-writers. Hence, we see the author creating a space for himself within the tradition of medical prognosis by contesting the tradition itself.¹¹

One of the more interesting discursive forms employed by the author to achieve this dynamic interplay between inclusion and isolation is a rhetorical figure, found often in didactic and protreptic contexts, perfect for just this purpose: the priamel. The priamel is defined by Elroy Bundy, in his famous study of Pindar’s *Eleventh Olympian*, as “a focusing or selecting device in which one or more terms serve as foil for the point of particular interest.”¹² And as William Race has shown, the priamel is used most frequently, irrespective of literary genre, when an author desires to highlight the superiority of his approach to a given subject by running through a brief catalog of other possible (and inferior) approaches.¹³ As such, the priamel is often associated either implicitly or explicitly with praise and blame; that is, with the blame or criticism of the items used as foil and the praise of the terms ultimately selected for elaboration. Consequently, the priamel is a fundamentally epideictic form, particularly in its capacity to advertise the ethically superior subject-position adopted by the author relative to the object of study. For the priamel allows the author to criticise proponents of the rejected terms while making a display of the process of selection itself.

As a typical example of the priamel form, I offer a passage from Isocrates’ letter *To Philip* (109), where the author is contemplating how Heracles ought to be praised:

¹¹ On the importance of contesting tradition in medical texts, see Lloyd (1987) 102–108.

¹² Bundy (1986) 5.

¹³ Race (1982) ix–xii.

Coming now to Heracles, all others who praise him harp endlessly on his valor or recount his labors; and not one . . . will be found to have commemorated his other excellences—I mean those which pertain to the spirit. But I see (ἐγὼ δ' ὁρῶ) here a field set apart and entirely unworked . . .

We note the basic rhetorical force and polemical tone of the priamel. The items used as foil are rejected and their proponents are mocked, while the author's chosen approach to the subject is highlighted by the act of selection thus effected. We note here too that the priamel gestures toward an ostensibly ongoing debate sparked by an implied question concerning how best to praise Heracles. The priamel, in fact, enables the author not only to stage such a debate, but to assume a subject-position within it. Isocrates gives himself verbal shape, as it were, by contesting tradition, and even goes so far as to claim originality in so hackneyed a subject as the praise of Heracles. Nor should we forget that this passage is fundamentally didactic and protreptic, since Isocrates is here attempting to instruct Philip-as-Heracles to lead the united Hellenes against the Persians-as-Trojans (*To Philip* 111–115). The priamel thus operates to persuade the reader of the correctness of the author's view of the world, and invites him to participate in that vision. Finally, on the purely formal level, we note the importance of the phraseology employed to mark the contrast between the items used as foil and the chosen subject of the author's discourse: ἐγὼ δέ. This phrase is so common in the priamel form that it is practically a formula, and has therefore been given a name: the "pronominal cap".¹⁴

We are now prepared to appreciate the rhetorical strategy operative in the opening of our treatise:

There are reports of physicians making frequent, true and marvelous predictions, such as I have never made myself, nor ever personally heard anyone else make. Here are some examples. A person seems to be mortally ill both to the physician attending him and to others who see him, but a different physician comes in and says that the patient will not die, but go blind in both eyes. In another case where the person looked in a very poor state, the physician that came in foretold that he would recover, but be disabled in one arm; to another person who was apparently not going to survive, one said that he would recover, but that his toes would become black and gangrenous. Other

¹⁴ Bundy (1986) 5–6.

predictions of this kind are reported in the same form. A different type of predicting is to foretell in merchants and adventurers death to some, madness to others, and other diseases to others; and in making divinations (προφητίζειν) concerning present and past times to be correct in every detail. Another form of prediction is recounted as follows: to discover in athletes and in people that are carrying out exercises and exertions prescribed because of illnesses whether they have failed to eat some of their meal, or have eaten something of a different kind, or have taken too much to drink, or omitted part of their walk, or practiced venery; none of these things escapes their notice, not even if the person disobeys in but little. This is how precise (ἐξηκριβώσθαι) all these kinds of predictions are said to be.

But I (ἐγὼ δὲ) however shall not divine (οὐ μαντεύσομαι) anything like this; rather I record the signs (σημεῖα) from which one must deduce which persons will become well and which will die, and which will recover or die in a short or a long time. (*Prorrh.* 2.1 [9.6.1–8.5 L.])

The author here appropriates the fundamentally epideictic and proreptic priamel form. A number of items (i.e. methods of prognosis) are advanced as foil for the selection that the author ultimately makes concerning his own preferred approach to the object of study. Here again, we see the transition to the author's own choice effected by the "pronominal cap" (ἐγὼ δὲ). Further, we detect in this priamel, as in the example from Isocrates, a conspicuously agonistic and contemptuous tone adopted in regard to the methods advanced as foil, which functions to reinforce the already polemical nature of this rhetorical figure in general. The author's contempt is particularly felt in the use of the words προφητίζειν and οὐ μαντεύσομαι, as Elsa García Novo has demonstrated. For she points out that verbs created *ad hoc* in—*izô* are not only often ironic and sarcastic, but are also explicitly pejorative. As comparanda she presents *lakanizo*, *mêdizo*, and *philippizô*. Moreover, these terms can be understood, as Garcia Novo demonstrates, primarily to signify the adoption of the "manners and opinions of somebody else."¹⁵ And we can add that the "somebody else" in each case tends to represent a quintessential "other" against which the "self" was often defined (i.e. Spartans, Persians, and Macedonians). The pejorative terms clearly function to distinguish the author from this quintessentially "other" type of prognostic practice, and enable him to define his own subject-position relative to these "others", all the while ridiculing their methods. The author's

¹⁵ García Novo (1995) 545.

diction thus reinforces the priamel's fundamental connection to matters of self-definition and self-presentation. Clearly then, the author is at pains to distance himself from physicians who practice a form of prognosis that, in his view, is dangerously similar to the practice of divination (*mantikê*). And as Edelstein and Langholf have shown, there had always been tension between divination on the one hand and medical prognosis on the other.¹⁶ The words *προφητίζειν* and *οὐ μαντεύσομαι* thus reflect the long and contentious ideological struggle waged by practitioners of these two prognostic disciplines. The author of *Prorrhetic* 2 has chosen the most ideologically charged terms possible with which to condemn his competitors. For he contrasts his own methods with those that blur the lines of demarcation between the two fields and transgress the boundaries which his approach ostensibly observes.

Thus the priamel as a whole involves the author (and reader) in an ongoing debate over the implied question, "how best to do medical prognosis?", even as it isolates his own (superior) answer to this question. Consequently, the priamel allows the author to foreground his own answer to the implied question as both a response to, and rejection of, competing methodologies. This opening discursive strategy focuses the reader's attention on the method ultimately chosen. The author invites the reader to join him in this act of selection and to adopt his contemptuous attitude toward those "other", rejected approaches.

It is also important to note that the selection dramatised by the priamel, as it underscores the choice made by the author, functions to demonstrate his superior character. The close association felt by the Greeks between one's character and one's choices is made explicit by Aristotle. In *Poetics* 6 we read: "Character (*êthos*) is that which reveals one's choice (*proairesin*)—that is, when otherwise unclear, what kinds of thing an agent chooses (*proaireitai*) or rejects, which is why speeches (*logon*) in which there is nothing at all that the speaker chooses or rejects contain no character." Thus, one's character is evident in one's choices, and one's choices indicate one's character. Consequently, the priamel can be said to allow the speaker to introduce character to his treatise, since it is a rhetorical figure that enacts a process of selection. And, of course, there is a rhetorical strategy at work here as well. Again with Aristotle: "character (*ethos*) constitutes

¹⁶ See Edelstein (1967) 65–85 and Langholf (1990) 232–254.

the most effective means of proof” (*Rhetoric* I.2.4, 1356 a 15). Hence, the priamel in *Prorrhetic* 2 enables the speaker to present his choice as the best, which reveals the superiority of his character. This in turn creates a sense of confidence in the reader that the author is the one to trust in regard to practicing medical prognosis. As such, the priamel is the perfect vehicle for achieving the goals of a proreptic essay. For it is at once aimed at its object (prognosis), its addressee, and at previous approaches made to the object of study. The reader learns right from the start where the author places himself within the practice of medical prognosis, and gets an idea of the subject-position he himself would adopt within this broader theoretical milieu should he choose to make the same choice as the author.

This choice largely involves rejecting the claims to strict accuracy (*atrekeia*) that the other prognosticators are said to have made in favor of a more humble and reasonable prognostic practice based on empirical observation of the *semeia*. The author sets his own (moderate) methods in opposition to the excessive claims of his colleagues. In contrast to these claims, the author stresses circumspection, caution, and a more realistic understanding of the limitations of the art. For we read:

I believe, in fact, that those who make predictions about lameness and other conditions of that kind make their predictions, if they are sensible (εἰ περ νόον εἶχον), only after the disease has become fixed . . . I also intend in other kinds of cases to make predictions more in line with human possibilities (προρρήθῆναι ἀνθρωπινωτέρως) than what is reported . . . I advise you to be as cautious as possible (ὡς σωφρονεστάτους) . . . in making predictions of this kind . . . I recommend that in making predictions and all other such practices you be cautious (σωφρόνως). (*Prorrh.* 2.2 [9.8.7–10.13 L.])

In contrast to the speedy and exactly accurate prognoses reportedly made by others, the author presents himself as a proponent of caution, patience, and moderation, one whose claims for prognosis are determined above all by *sôphrosunê*. As such, the author takes a stand against the exorbitant claims of others as a defender of moderation and prudence within the *technê* of medical prognosis.

Moreover, the fact that the author contextualises his opposition to these other prognosticators in terms of their outrageous claims to accuracy and success is quite interesting.¹⁷ This is precisely the tactic

¹⁷ In this regard, our author would agree with the sentiments of the author of

adopted by Isocrates in *Against the Sophists*, a text which is a particularly apt comparandum for our treatise, since we know that it was designed to attract pupils to the author's school in Athens.¹⁸ Isocrates, like our author, is faced with the task of distancing himself from individuals whose exorbitant claims might attract students, but ultimately bring the entire *technê* into disrepute, even as he defines a more prudent approach to his object of study. Indeed, his rhetorical strategy is strikingly similar to that found in *Prorrhetic* 2. For example, Isocrates says:

If all who are engaged in the profession of education were willing to state the facts instead of making greater promises than they can possibly fulfil, they would not be in such bad repute with the lay public . . . For I think it is manifest to all that foreknowledge of future events is not vouchsafed to our human nature . . . But these professors have gone so far in their lack of scruple that they attempt to persuade our young men that if they will only study under them they will know what to do in life and through this knowledge will become happy and prosperous . . . and they promise to make their disciples all but immortal. (*Against the Sophists* 1–4)

It is clear that Isocrates' primary criticism of his opponents is set up in the same way as that found in *Prorrhetic* 2. For he too is angered by the excessive claims that others make for his *technê*, which in turn gives the whole profession a bad reputation. In particular, his polemic is directed against those who purport to be able to offer their pupils strict accuracy in foretelling the future. As such, Isocrates and our author criticise their opponents on precisely the same grounds, albeit the individuals in each case are practitioners of two very different *technai*. Be that as it may, it is the rhetorical strategy adopted by

Ancient Medicine (De Vetere Medicina), who says: "That physician who makes only small mistakes would win my hearty praise. Perfectly exact truth (τὸ ἀκριβὲς) is but rarely seen." (*VM* 9.20–22 [1.590.2–4 L.]). Moreover, the need for doctors "to police" their *technê* from within, especially in regard to claims of infallibility and strict accuracy made by certain practitioners themselves, seems to have been a very real concern. For example, the author of *On the Sacred Disease* criticises his opponents as men who "pretend to have some great knowledge" (προσποιέονται πλέον τι εἰδέναι, *Morb. Sacr.* 2 [6.354,14–15 L.] and 3 [6.358,13–14 L.]). That one of the biggest challenges to the medical profession's credibility came from within, from practitioners themselves, is made clear at *Law (Lex)* 1.2 (4.638,1–3 L.). For there we read: "Medicine . . . through the ignorance (*amathia*) of those who practice it, is now of all the arts by far the least esteemed."

¹⁸ At *Antidosis* 193–194, Isocrates himself describes *Against the Sophists* as a treatise "aimed at those who wished to become my students."

each author that most interests me. For, like our author, Isocrates poses as a more prudent and cautious teacher, one who recognises the limitations of his art, and uses the excessive claims of his opponents as a point of departure for defining his own methods. In contrasting his own views with the outrageous claims of others, Isocrates goes on to say:

For myself, I should have preferred above great riches that philosophy had as much power as these men claim; for, possibly, I should not have been the very last in the profession nor had the least share in its profits. But since it has no such power, I could wish that this prating might cease. (*Against the Sophists* 11)

Isocrates here poses as the defender of moderation within his *technê*. He uses this stance in order at once to distance himself from certain odious strands within the practice of rhetoric, and to define and advertise the appropriate approach to, and expectations about, the art as a whole. Consequently, posing as the defender of moderation is revealed to be a powerful strategy by which to create a dignified space for oneself within the practice of a given *technê*, especially in the context of a protreptic essay.

Returning to *Prorrhetic* 2, the author is quick to point out that his own views on the question of accuracy will not be dogmatically enforced. He allows for dissension, even in this important area:

The alleged precise knowledge (*atrekeias*) concerning exertions and exercises, as those who speak about it call it, I personally hold not to exist, although, if someone does believe in it, I do not oppose his belief. For such suppositions are not discredited by any sign, either good or bad, which you can trust in order to be certain whether or not the matter has been accurately reported. At all events, a person who wants to believe may do so, and I do not stand in his way. (*Prorrh.* 2.3 [9.10.16–21 L.])

This statement illustrates further the author's rejection of claims to absolute accuracy in all cases, and his willingness to tolerate dissension when the evidence is inconclusive, all of which is based on the author's adherence to the basic principles of his "semiotics". Further, this remark would be most appropriate if it is addressed by a teacher to a prospective student, as it responds in advance to issues concerning the relative dogmatism inherent in the author's views and methods (and, hence, in his curriculum in general). And at the very least, the author here positions himself relative to the speaker as

someone who might be in a position at some point “to oppose” him and “stand in his way” should he wish.¹⁹

THE STRUCTURE OF THE TEXT

Let us now turn to an analysis of the structural features of our treatise that seem to corroborate my understanding of this text’s essentially protreptic and didactic modality. Firstly, the basic structure of our text resembles the architecture of at least two other medical treatises which can also be understood to function essentially as advertisements of the author’s basic positions and methods: *On the Sacred Disease* and *On the Nature of Man*.²⁰ These texts (broadly speaking) exhibit a triadic structure. Each opens with a critique of others’ theories and practices, followed by a transition to the author’s own views. These views are initially introduced at the theoretical level along with some general remarks that further qualify the theoretical stance thus adopted by outlining some of the principles that will be important for the third section. The third section itself stages a movement from the general theoretical principles outlined in the second section to a sustained application of these principles to specific cases. Thus in *On the Sacred Disease* we find the first four chapters (6.352–364.8 L.) devoted to a refutation of the theory and practice of the *magoi* in particular, and of those who hold that epilepsy is peculiarly divine in general. Similarly, *On the Nature of Man* opens with a polemic against the application of monistic theory in philosophy and medicine (1–2 [6.32–36,16 L.]). Each of these texts open by attempting

¹⁹ As such, our author adopts a rather authoritative and didactic tone even as he suggests that he will not be a dogmatic master. This authoritative stance relative to the reader is discernible elsewhere as well. In addition to the relative subject-positions implied by the analogy author-reader/trainer-athlete mentioned above, we note the remarkable preponderance of infinitives used throughout the treatise as imperatives of the second person (presumably singular, for the only four conjugated forms in the second person are all singular: at 15 [9.42,3 L.], 35 [9.66,16 L.], and 42 twice [9.72,8 and 10 L.]). This rhetorical feature constantly engages the reader’s attention and colors the authority of the author. For it gives the text a rather formal and serious tone. So Smyth-Messing (1984) 448: “The person addressed is regarded as the subject. This infinitive [sc. in second person commands] is commoner in poetry than in prose (where it has a solemn or formal force).”

²⁰ My discussion here follows the more comprehensive analysis of Dean-Jones (2003), who also includes *Ancient Medicine* in her examination.

to position their authors within debates concerning their objects of study, and we see in each a similar agonistic distancing of the author's own positions from those of others who work within their theoretical and practical domains (i.e. from charlatans and monists respectively).

On the Sacred Disease continues with a transition in chapter five (6.364,9–366,4 L.) to the author's own views. We are introduced to his acceptance of the theory of pangenesis, followed in chapters six and seven (6.366,5–368,9 L.) by a discussion, crucial for the text's general physiology, of the great importance of the brain for understanding and treating the more serious illnesses. The text progresses at the general level with a brief discussion of how the disease operates on the body, with a remarkable description of an epileptic attack in chapter ten (6.372,4–374,20 L.). From there, *On the Sacred Disease* deals with a number of specific cases, thus applying and demonstrating the theoretical principles previously set forth (11–21 [6.374,21–396 L.]). With this transition from the general and theoretical to the specific and applied, we can compare the movement effected within *On the Nature of Man*. Following the opening criticism of monistic theory (1–2 [6.32–36,16 L.]), the author moves on to a general explication of his own physiology (3–7 [6.36,17–50,13 L.]). In chapter eight (6.50,14–52,3 L.), as Jouanna has persuasively shown, we find a transition from this general physiology to a more focused discussion of pathology and an application of some of the principles set out in chapters three through seven (6.36,17–50,13 L.).²¹ In chapters twelve through fifteen (6.60,20–68 L.) in particular we see the author of *On the Nature of Man* applying his own general theoretical principles to specific cases. So then, how does the analysis of the basic architecture of these two treatises, which are analyzable as possessing a protreptic function, help us to better understand the basic discursive practices and structural features adopted by the author of *Prorrhetic 2*?

In short, I believe that our treatise also exhibits this triadic structure, and that this adds further weight to the notion that *Prorrhetic 2* is in essence an advertisement intended to attract pupils.²² For our

²¹ Jouanna (1975) 19–38.

²² Though considerations of brevity prohibit me from developing this further here, I suggest that *Prorrhetic 2* was intended for a more advanced student clientele than either *On the Sacred Disease* or *On the Nature of Man*. For example, the author can mention a technical term like *apostases* (*Prorrh.* 2.2 [9.8,5 L.]) without explanation. This suggests that the reader was assumed by the author to be familiar with certain basic medical terms and concepts.

text, following its opening criticism of its opponents, moves on to a general discussion of the author's own approach to medical prognosis. Thus, in chapter two we learn of the great importance the author places on the empirical observation of the *semeia*, his insistence on circumspection and careful deliberation when making predictions, and his concern that one not try to demand from the skill more than is humanly possible. Chapter three continues at this general theoretical level as the author reiterates his objections to the "precise knowledge" of other prognosticators, contrasting this with his own more humble and prudent approach. And yet, although the author disavows precise knowledge and, like Isocrates in *Against the Sophists*, distances himself from those who promise their students more than the *technê* is humanly capable of, he is quite confident that his methods are the best.²³

In fact, the remainder of chapter three can be read, in light of the author's exposition of his general views, as a veritable syllabus of the means by which one should properly investigate the signs. In particular, I wish to stress the author's emphasis on the deployment of the various senses (sight, sound, smell, and touch) in his overview of the examination of the *semeia*. For we read:

"It is possible properly to examine all these conditions, as well as any others, by employing the methods which we possess and which we employ well on every occasion. For, in the first place, it is easy to know by judgement and observation (τοῖσιν ὀφθαλμοῖσιν), in the case of a person lying ill in a fixed place and charged with some strict regimen, whether he is disobeying in some matter . . . Furthermore, by using your hands (τῇσι χερσὶ) to palpate his abdomen and the vessels, you are less likely to make a mistake than if you do not do this. Also, in patients with fevers your nose (αἷ τε ῥῖνες) gives many true indications, for their odors differ greatly . . . And then, by listening with your ears (τοῖς ὠσὶ) to the voice and the breathing, it is possible to recognise things that are not equally clear in healthy persons. In any case, until a physician has learned the habits of particular diseases and patients, he ought not to make any prognostication . . ." (*Prorrh.* 2.3 [9.12.9–22 L.]

The author is quite explicit that successful prognosis depends on the use of the various senses to interpret accurately the somatic signs. This

²³ This ambivalence in *Prorrhetic* 2 between the author's self-assertive confidence in his methods and his emphasis on restraint and open-mindedness is well analyzed by García Novo (1995).

emphasis on the deployment of the various senses (only taste is missing from our list) is, of course, not unique to the author of *Prorrhetic* 2, though it does represent his appropriation of a particular strand of prognostic theory and practice.²⁴ More importantly for my examination of the structure of our treatise, the various senses are applied throughout the third section of the text, where we get the application of the author's general views concerning semiotic prognosis to specific cases of illness (*Prorrh.* 2.5–43 [9.20–74 L.]).²⁵ Hence, we can detect in our treatise a triadic structure similar to the architecture of *On the Sacred Disease* and *On the Nature of Man*, and, at least for the first two parts, of Isocrates' (undeniably protreptic) *Against the Sophists*.²⁶

CONCLUSION

In conclusion, I have highlighted some of the more interesting discursive practices and structural features operative in *Prorrhetic* 2 and have tried to show how these structure our reception of the text. We have seen that the author deploys a wide array of epideictic, didactic, and polemic modes, in order to convince his reader that his position within, and response to, the tradition of medical prognosis is the one that should be adopted. Moving beyond the for-

²⁴ On the importance in certain modes of medical prognosis of using all the senses available, see Jouanna (1999) 291–303.

²⁵ The deployment of sight is too numerous to list. As for touch, see 6 (9.22.7 L.), 16 (9.42.11 L.), 18 (9.44.5 L.), 23 (9.54.1 L.) and 24 (9.54.17 L.); for smell, see 7 (9.26.14–15 L.), 23 (9.52.7 L.) and 36 (9.66.20 L.); for sound see 23 (9.52.5 L.). And although the use of taste is not mentioned in chapter three and is not explicitly mentioned anywhere in the text, it may be implied in chapter eighteen (9.44.25 L.), where the author discusses tears that flow hot and “salty” (ἄλμυρόν). One assumes that the only way for the physician to be absolutely certain that a patient's tears are in fact salty would be to taste them for himself, especially given our author's concern that patients do not always report their symptoms accurately (*Prorrh.* 2.2 [9.10.15 L.]).

²⁶ While it is impossible to tell how Isocrates' *Against the Sophists* continued after chapter twenty-two, which is now lost, we can detect here too at least the beginnings of this same triadic structure. For in chapters one through thirteen we get a polemic against certain types of sophistry. Chapters fourteen through twenty-one give us a transition to the author's general views (e.g. the importance he places on *physis*, his general approach to teaching and oratory). And at chapter twenty-two, just before the text breaks off, Isocrates is certainly effecting a transition, which may well have been followed by a more sustained and focused application of his basic principles set forth in fourteen through twenty-one.

malist's desire to understand how the text works, I suggest that our text's formal features are reflexes, effects, of a specific socio-cultural function, namely, the production of a protreptic essay.

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SPECIAL FEATURES IN *INTERNAL AFFECTIONS*: COMPARISON TO OTHER NOSOLOGICAL TREATISES

Pilar Pérez Cañizares

Summary

Studies on the Hippocratic treatise Internal Affections are very rare, the length and difficulty of the text being probably a reason for it. In this paper two stylistic features of the treatise are discussed: the abundant use of some adverbs of frequency and the extremely wide use of the third person imperative. Through these linguistic devices the author underlines constantly that he is a very experienced practitioner and is much more direct in his prescriptions. This personal reworking of shared material results in one of the richest texts of the Hippocratic Collection, as far as language and precision are concerned.

It is not at all surprising that *Internal Affections*¹ is among the most neglected works of the Hippocratic Collection. First of all, *Internal Affections* is a very long treatise. It is longer than any of the nosological treatises belonging to the so-called Cnidian School,² even though what we can read today is thought to be a version that has lost the beginning and starts abruptly.³

Internal Affections is longer than other treatises not because the author deals with more diseases; actually, the number of diseases in *Internal Affections* is smaller than, for instance, in *Diseases* 2b.⁴ If we compare both works, *Internal Affections* as we read it today deals with fifty-three

¹ *De affectionibus interioribus*; henceforth *Int.*

² Compare for instance the length of the following treatises in Littré's edition pages: *Int.* = Littré 7.166–303; *Affections* (*De affectionibus*) = Littré 6.208–271; *Diseases* (*De morbis*, henceforth *Morb.*) 1 = Littré 6.138–205; *Morb.* 2 = Littré 6.8–115 (*Morb.* 2a Littré 6.8–18; *Morb.* IIb Littré 6.18–115).

³ About this lost beginning see Jouanna (1974) 177. A very interesting approach to this point is the one by Lami, who thinks the beginning of the treatise is the one we read today. This theory is based on the textual arrangement of the treatise. Some studies devoted to *Int.* are: Wittern (1978), Roselli (1990) and Pérez Cañizares (2002); for a translation see Potter (1988).

⁴ I am referring to chapters twelve to seventy-five of this treatise. For the two different treatises transmitted as one see J. Jouanna (1974) 26–126 and (1983) 7–12.

diseases. As the treatise starts with a lung disease, we can assume that the diseases affecting the head are lost. *Diseases* 2b describes sixty-six diseases, including those affecting the head.

But even if the number of diseases may have been similar, their description is quite different. The author of *Internal Affections*, apart from dealing with the aetiology of almost every disease, gives a much more detailed, sometimes even too dense and somehow cumbersome account of symptoms, causes of disease and therapeutic measures.

What I would like to show now is how the author of *Internal Affections* presents himself as a very experienced practitioner, as a physician who wants to write a handbook in which even the slightest sign of the diseases is foreseen. It is clear that he had already practised medicine for many years when he wrote the treatise. Undoubtedly he had treated many patients and therefore wanted to promulgate all his experience so as to provide his fellow doctors with trustworthy material.

Let us take the account of symptoms in chapter forty as an example. In this paper I will be using both Potter's text and translation.

ἀπὸ τούτων μάλιστα τὸ νόσημα γίνεται. Ἄρχεται οὖν πυρετὸς τριταῖος ἢ τεταρταῖος κατ' ἀρχὰς γινόμενος, καὶ πόνος ἰσχυρὸς ἐν τῇ κεφαλῇ ἐνέστηκεν, ἐνίστε δὲ καὶ ἐν τῷ σώματι διαλείπει . . . ἐνίστε δὲ καὶ ὅλον τὸ σῶμα ἐποιδέει, καὶ ἐς τὰ στήθεα καὶ ἐς τὸ μετὰφρενον ἡ ὁδὸν ἔχει, ἐνίστε δὲ καὶ ἡ γαστήρ τετάρακται, καὶ τοῖσιν ὀφθαλμοῖσιν ἐξορᾷ ἰσχυρῶς . . . πολλάκις δὲ καὶ φλεγμαίνει ὁ φάρυγξ. Τούτον ὅταν οὕτως ὁ πόνος πιέζη, ἔστιν δ' ὅτε καὶ ὀρθοπονίῃ ἰσχυρῇ ἐμπίπτει, καὶ πολλάκις ἐξαπίνης ὑπὸ τοῦ πόνου τὴν ψυχὴν ἀρήκεν ἐν ἑπτὰ ἡμέρησιν ἢ τεσσαρεσκαίδεκα· πολλοὶ δὲ διαφεύγουσι καὶ ἐς τὰς εἰκοσιτέσσαρας. Πολλάκις δὲ ἐξαπίνης ἡ νόσος ἀφῆκε, καὶ δοκεῖ ὑγιὲς εἶναι· ἀλλὰ φυλάσσεσθαι χρή, ἕως ἄν τέσσαρες καὶ εἴκοσιν ἡμέραι παρέλθωσιν· ἢν δὲ ταύτας φύγη, οὐ μάλα θνήσκει.

It is from these things that the condition *usually* arises. Fever begins, then, as a tertian or a quartan; intense pain establishes itself in the head, and is *sometimes* also present intermittently in the body . . . *sometimes* his whole body swells up, too. Pain occupies the chest and back; *sometimes* the belly is set in motion. The patient protrudes his eyes greatly . . . and *often* his throat swells up too. When pain is pressing the patient like this, *sometimes* severe orthopnoea comes on, and *often*, under the strain, a patient has suddenly given up the ghost in seven or fourteen days; but *many* survive for twenty-four. *Often* the disease suddenly resolves, and the patient seems to have recovered; still he must take care until twenty-four days have passed: *if he escapes those, death is rare.*

Internal Affections 40.8 (p. 202.18 ff. Potter = 7.264 L.)

After reading this text one could well ask the following question: how many sufferers from this disease had the author treated before writing

such an account? The only possible answer is: many. We could also be facing a practitioner who is presenting the results of his own experience together with theoretical knowledge or with indirect information. It is now commonly accepted that *Internal Affections* together with *Diseases 2b* are two treatises that contain similar material, which is linked with the Cnidian School. Whether the treatises derive directly or not from the Cnidian Sentences will not be discussed here,⁵ but the fact that they share material is beyond any discussion. It is through the use of some linguistic devices that the author includes his experience in the normal account of symptoms, namely the use of ἐνίστε, ἔστιν ὅτε, πολλάκις as adverbs. They appear with a much higher frequency in *Internal Affections* than in other works of the Hippocratic Collection, which can be easily shown by using the *Index Hippocraticus*.⁶ For instance, there are eighteen passages where πολλάκις comes up in *Internal Affections*, the highest use in the Corpus Hippocraticum; in *Diseases 2b* there are only five examples.⁷ Concerning ἐνίστε, its use is quite similar in both treatises: twenty-five examples in *Diseases 2b* and twenty-eight in *Internal Affections*.⁸ Above all, the use of μάλιστα is the most significant: eighty-eight examples in *Internal Affections* as against thirty-five in *Diseases 2b*.⁹ Even if there are different uses of this adverb, it is very often used for generalisations as in the text above.

Another interesting construction is the use of *philein* with the infinitive, in the sense of ‘usually do’, which is scarce in the whole of the Hippocratic Corpus; there are four examples of this construction in *Internal Affections*—for instance:

ἀπὸ τούτων φύματα φιλέει γίνεσθαι ἐν τῷ πλεύμονι καὶ ἐκπυοῦσθαι

“from this tubercles are likely to form in the lung and to produce pus”
Internal Affections 3.21 (p. 82.16 Potter = 7.174 L.)

—but none in *Diseases 2*.

⁵ The bibliography covering medical schools, and especially the Cnidian, is abundant. See e.g. Jurk (1900) 12–20; Ilberg (1925) 7–9; Edelstein (1931) 159 ff.; Bourgey (1953); Lonie (1965); Jouanna (1974) 176–177; Grensemann (1975) 145 ff.; Kollesch (1977); Thivel (1981) 67 ff. and Langholf (1990) 12–15. See also Gronewald (2001) 1–13. This editor claims that the text of the papyrus Inv. 6067, of the second century AD, contains fragments of the *Cnidian Sentences*, because there is a correspondence with some parts of *Int.*, namely with some of the chapters on spleen diseases.

⁶ Kühn–Fleischer (1986–1989); Anastassiou–Irmer (1999).

⁷ On the basis of total word count (*Int.* 16200 words and *Morb.* 2b 11300 words), that means a proportion of 2.51 in *Int.* to 1 in *Morb.* 2b.

⁸ The proportion is here of 0.78 in *Int.* to 1 in *Morb.* 2b.

⁹ The proportion is in this case of 1 in *Morb.* 2b to 1.75 in *Int.*

Let us now take a look at another example in the same chapter. As I have said before, we should notice how the author transmits his personal experience:

πλεύμονος ἥδε γίνεται μὲν ἡ νοῦσος ἀπὸ τῶνδε μάλιστα· ὅταν ὁ πλεύμων αἷμα ἐλκύσας ἐφ' ἑωυτὸν ἢ φλέγμα ἀλμυρὸν μὴ ἀφῇ πάλιν, ἀλλ' αὐτοῦ ξυστραφῇ καὶ ξυσσαπῇ, ἀπὸ τούτων φύματα φιλέει γίνεσθαι ἐν τῷ πλεύμονι καὶ ἐκπυοῦσθαι . . . καὶ ὁδύνῃ ἐν τοῖσι στήθεσι καὶ ἐν τῷ μεταφρένῳ ἔγκειται, ἐνίοτε δὲ καὶ ἐν τῷ πλευρῷ· καὶ ὀρθοπνοίῃ σφοδρῇ ἐπιπίπτει. οὗτος μὲν μέχρι τεσσερεσκαίδεκα ἡμερέων τοιαῦτα πάσχων διατελεῖ, πολλάκις δὲ καὶ ἐπὶ πλεῦνας τεσσερεσκαίδεκα ἡμερέων· ἔπειτα ῥήγνυται πύα, καὶ ἀποπτύει πολὺ· πολλάκις δὲ καὶ οἷον χιτῶνας ἀραχνίων ἀποπτύει πολὺ· πολλάκις δὲ ὕφαιμον.

This disease of the lung *generally* arises in the following way: when the lung attracts blood or salty phlegm and does not discharge it again, but it gathers there and grows putrid, from this tubercles are likely to form in the lung and to produce pus . . . pain in the chest and back, *sometimes* also in the side; severe orthopnoea. These continue until the fourteenth day, *often* for even more than fourteen days. Then pus breaks out and the patient coughs much up; *often* he also expectorates material that looks like spiders' web and *often* sputum charged with blood.

Internal Affections 3.8 (p. 82.13 Potter = 7.174 L.)

At the last Hippocrates Conference, held in Nice in 1999, I also presented a paper devoted to *Internal Affections*.¹⁰ Through the style of the treatise I showed then that the author was very concerned about the duration of the disease, which should be as short as possible. The physician's intervention had to be not only effective, but also to work quickly.¹¹ In my opinion, the reworking of the medical material by the author of *Internal Affections* results in a treatise whose medical content is quite similar to that found in other books. What is different is the implicit message of the practitioner. Through his style the author is constantly warning his colleagues, the targeted readers, that the same disease may manifest itself in different ways, that patients may have a variety of symptoms and that it is important to act appropriately and at the right moment against the disease.

The second important feature I would like to highlight now is the use of the third person imperative¹² in therapeutic prescriptions. Even

¹⁰ See Pérez Cañizares (2002).

¹¹ Note the remarks of Boncompagni (1972) 226, where she comments on the concept of *kairos* both in *Int.* and in *Morb.* 2. In both treatises practitioners are asked to intervene at the right moment.

¹² See Rijksbaron (1984) 43–44: 'In the case of imperative, the following applications of the values "not completed" and "completed" may, among others, be distinguished:

on a not very careful reading of *Internal Affections*, an extensive use of the third person imperative in the parts devoted to therapy stands out starkly as a feature of style. The use of the third person imperative can be found in *Diseases* 2 as well, but it is much more frequent in *Internal Affections*.¹³ The gynaecological treatises have a very high rate of use of this form of imperative too. Normally, this third person imperative is used to refer to dietetic prescriptions in a wide sense.

We may take, for instance, the following passage as an example:

ὅταν δὲ παύσῃται ἡ νοῦσος, διαίτη *χρήσθω*, . . . καὶ λούσθω δὲ ἐκάστης ἡμέρης, καὶ *περιπατεῖτω* ὀλίγα μετὰ σιτία· καὶ ἐσθῆτα κούφην *ἔχέτω* καὶ μαλθακὴν· καὶ *γαλακτοποιεῖτω* τὴν ὥρην καὶ *ὀροποτεῖτω* πέντε καὶ τεσσεράκοντα ἡμέρας. ταῦτα ἦν ποιέη, *τάχιστα* ὑγιὲς ἔσται.

When the disease is over, let the patient follow the regimen of . . . Let him bathe each day, and walk a little after his meals; let him have foods that are light and mild and drink milk and whey in season for forty-five days. If he does these things, he will very quickly become well.

Internal Affections 48.6 (p. 236.10 Potter = 7.288 L.)

To confirm this first impression and by using this time the TLG and the Concordantia¹⁴ we can check approximately how extensive the use of third person imperative is in other treatises.

The first two forms, *χρήσθω* and *λούσθω* come up very often in *Internal Affections*, *Diseases* 2b and the gynaecological treatises. Both seem to be among the most common imperative forms used in the Hippocratic Collection, together with *πινέτω*. As far as *ἔχέτω* is concerned it appears only once in *Diseases* 2b but twenty-two times in *Internal*

(i) The present imperative is used in order to command someone to proceed with an action which he was carrying out already, or with *mê*, not to proceed with it ((dis)continuative use).

(ii) When someone is ordered to carry out an action which is not yet being carried out, the present imperative emphasizes the process, the course of the action, either relative to other actions or in “absolute” use; the latter may lead to an iterative interpretation.

The aorist imperative, on the other hand, emphasizes the completion of the action. In cases where an aorist imperative occurs in a sequence of imperatives it is implied that the action expressed in the aorist must be completed before another action is carried out; an aorist imperative used “absolutely” often refers to a single well-defined action.⁷

See also Schwyzer–Debrunner (1950, repr. 1975⁴) 339 ff.

¹³ About the use of imperative and infinitive forms in recipes in both treatises see Goltz (1974) 121 ff.

¹⁴ Maloney–Frohn (1989).

Affections and twelve in the gynaecological treatises;¹⁵ περιπατεῖτω appears only twice in *Diseases* 2b but in thirteen passages in *Internal Affections*, where the aorist περιπατησάτω can be found as well.¹⁶ To finish with the examples of the text, forms like γαλακτοποτεῖτω and ὀροποτεῖτω come up exclusively in *Internal Affections*, and the same applies to other imperative forms like εὐωχεῖσθω, and (μὴ) ῥιγούτω; of δειπνεῖτω there are five examples in *Internal Affections* and only one in *Diseases* 2b.¹⁷

Other verbs like ἐσθιέτω or ποιείτω are much more common in *Internal Affections* and the gynaecological treatises than in *Diseases* 2b.

Third person imperative forms turn up normally in groups, where we find at least five verbs in a list of instructions. These lists can be found in *Diseases* 2b as well, but in *Internal Affections* passages like the following are common:

καὶ τοῖσι λουτροῖσι μὴ πυνικὰ λούσθω, ἀλειφέσθω δὲ μᾶλλον, μὴδὲ ῥιγούτω, καὶ τοῦ ἡλίου ἀπεχέσθω, μὴδὲ λαγνευέτω. . . . τὰ σιτία διελὼν ἃ μεμαθήκει ἐσθιῖν δέκα μέριδας, ἔπειτα μίαν ἀφελὼν μερίδα, τὰ λοιπὰ καταφαγέτω, ὅσον δ' ἐχέτω κρέας οἷος τετυρμένον καὶ περιπατησάτω δέκα σταδίους ταύτης τῆς ἡμέρης. . . . ἐλάσσω ἐσθιέτω καὶ περιπατεῖτω. . . . οἶνον δὲ πινέτω Μένδειον, λευκόν, αὐστηρόν. ταῦτα ποιείτω τρεῖς ἡμέρας. ἔπειτα . . . τὸν αὐτὸν τρόπον ὥσπερ ἀφήρει, οὕτω προστιθέτω· τῶν δὲ περιπάτων ἀφαιρείτω μέχρι τῶν δέκα ἡμερῶν. ἔπειτα ἡσυχίην ἐχέτω ὡς μάλιστα, καὶ εὐωχεῖσθω σιτία τε καθαρὰ καὶ ὅσα ὡς πλείστα. . . .

Let the patient not take many baths, but rather be anointed with oil. He must avoid chills, sun and venery . . . then have him divide the cereals he is accustomed to eat into ten portions, and on the first day subtract one portion and eat the rest; as main dish let him eat ground mutton; also have him walk ten stades . . . have him reduce what he eats . . . and walk ten stades more . . . Also give him dry white Mendean wine to drink. Let him do this for three days. Then have him decrease his walks for ten days (and eat more) adding a portion a day in the same way as he subtracted. Then, let him keep as quiet as possible, be well fed on fine cereals and very generous main dishes . . .

Internal Affections 17.6 (p. 126.19 Potter = 7.208 L.)

No doubt more examples could be given, but it has already been shown that the use of the third person imperative is a stylistic fea-

¹⁵ Again, on the basis of total word count (*Int.* 16200 words, *Morb.* 2b 11300 words and 63214 in the gynaecological treatises), that means 15.3 in *Int.* to 1 in *Morb.* 2b and 7.15 in *Int.* to 1 in the gynaecological treatises.

¹⁶ The proportion is here 4.53 in *Int.* to 1 in *Morb.* 2b.

¹⁷ The proportion is here 3.48 in *Int.* to 1 in *Morb.* 2b.

ture of the author of *Internal Affections*. The linguistic function of this form is clear: it is used to give indirect orders. In all these cases, the second person, the doctor to whom the medical treatise is addressed, is viewed as a messenger who will transmit the orders. Obviously, by using the imperative, the author is being much more direct and personal than with the infinitive. In their opposition as moods used to give orders, the imperative is the marked term.

With the use of the third person imperative, the author is giving two different types of orders:

- (1) He is directly ordering the practitioner to transmit to the patient what he must do in every situation.
- (2) He is indirectly ordering the patient to follow certain therapeutic measures.

To sum up, I have tried to show two features that characterise the style of the author of *Internal Affections*. The first one is the use of linguistic devices that underline the multiplicity of cases the author has witnessed and his considering the disease as something with very varied developments. The second feature is the extensive use of third person imperatives. By using these verbal forms, the author adopts a position in which he is giving orders to both practitioners and patients. This feature is common to *Internal Affections* and the gynaecological treatises but scarcely appears in *Diseases 2b*.

It is through these particularities that the implicit message of *Internal Affections* is different from, for instance, that of *Diseases 2b*. Even though both treatises have strong affinities not only in content but also in form, such features make *Internal Affections* consistent as a text, and different. It has often been shown that *Internal Affections* and *Diseases 2* share material, as they probably derive from the *Cnidian Sentences*. However, the personal reworking of this pre-existing material by the author results here in a text where this shared medical knowledge and the author's particular and personal views are very balanced. As far as language and detail are concerned, *Internal Affections* is surely the richest among the Cnidian treatises.¹⁸

¹⁸ This was already the opinion of Lonie (1965) 12: 'The treatise *peri tôn entos pathôn* is the most systematic Cnidian work which we possess, superior to the other treatises in language, arrangement, coherence and inclusion of detail.'

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ON *ENANTIÖSIS* IN THE CORPUS HIPPOCRATICUM: THE *EU-* / *DUS-* OPPOSITION*

Marcos Martínez

Summary

In this contribution, the need for a thorough study of enantiôsis (pairing of opposites) in the Corpus Hippocraticum (henceforth CH) is put forward with the help of the modern semantic classifications of antonyms. The case of the eu- / dus- composition is offered here as an example, and only some of its more general aspects will be mentioned in connection with the CH.

I would like to use the opportunity of my participation in this eleventh International Hippocrates Colloquium to put forward the need to carry out, once and for all, the linguistic investigation of one of the most frequent phenomena in the Corpus Hippocraticum: *enantiôsis* or the pairing of opposites. From a medical point of view, this principle is known as ‘allopathy’, or treatment by means of opposites (*contraria contrariis curantur*), and has its opposite in ‘homoeopathy’ or treatment by means of equals (*similia similibus curantur*). Both therapeutic procedures are well exemplified in the CH and have recently been the object of numerous studies.¹ However, from the point of view of verbalisation, that is to say, of the linguistic means by which such procedures are expressed, we still lack a comprehensive monographic study examining the linguistic mechanisms which the authors of the CH use for the expression of *enantiôsis*. More than ten years ago, I stressed the need for a linguistic study of *enantiôsis* in the CH.² Although recently some works dealing with parts of this topic have been

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¹ I would emphasise here those of Müller (1965), Thivel (1977), Ferrini (1995) and (1996), and Nikolova (1999).

² See Martínez (1992b) 256–257.

published, which I will mention later on, nevertheless such a monograph, as far as I know, is absent to the present day. Already at the Hippocratic Colloquium of Strasburg (1972), the great French Hellenist P. Chantraine deplored the fact that grammarians and linguists showed so little interest in the language of Hippocrates.³ He explained that this attitude was due to their refusal to operate with a manuscript-based documentation of which little is known historically and which offers data of uncertain authenticity. Here I will restrict myself to some general considerations in relation to our study mentioned above.

That the concept of *enantiōsis* is fundamental to the Corpus Hippocraticum was stressed by Láin Entralgo, one of the world's most distinguished experts in Hippocratic medicine, when he claimed: "Without the *enantiōsis* notion, the physiology, nosology and therapy of the Hippocratic doctors would not be intelligible."⁴ The term *enantiōsis* itself is once mentioned in *On Sevens*,⁵ whereas the compound *hupenantíōsis*, with the same sense of 'contrariety', is documented twice, in *Aphorisms* and *On Places in Man*.⁶ But if these nouns have little presence in the CH, we cannot say the same for their corresponding adjectives, verbs and adverbs: 139 occurrences of *enantios*, twelve of *anantioomai*, five of *enantiōs*, twenty-seven of *hupenantios* and seven of *hupenantioomai*. To all of these we should add the four examples of *antikeimai*, which is used to render the same idea of 'opposites'. These figures already indicate the importance that this idea has in the Corpus Hippocraticum. Anthoine Thivel prefers to speak of *hupenantíōsis* for the general therapeutic principle founded on opposites,⁷ as it is documented at *Aphorisms* 2.22 (4.476 L.): ἀπὸ πλησμονῆς ὁκόσα ἂν νοσήματα γένηται, κένωσις ἰῆται, καὶ ὁκόσα ἀπὸ κενώσιος πλησμονή, καὶ τῶν ἄλλων ἢ ὑπεναντίωσις ("Diseases that occur as a result of satiety are cured by evacuation, and those that arise from evacuation are cured by satiety; also in the other cases, the opposition of opposites.") This is one of the most eloquent passages in the Corpus Hippocraticum, in which the principle of allopathy is explicitly stated as one of the basic principles of the medical art, accepted by all the authors of the Corpus. Otherwise the text refers, for its exemplification, to the

³ Chantraine (1975) 36.

⁴ Láin Entralgo (1977) 80.

⁵ See Roscher (1913) vol. 2, 6.

⁶ See Maloney-Frohn (1986) and Kühn-Fleischer (1986).

⁷ Thivel (1977) 165.

pair of opposites *plêsmônê-kenôsis* (satiety-evacuation), which is one of the most frequent examples of *enantiôsis* in the Corpus Hippocraticum.

Enantiôsis, of which I am to speak next, I understand approximately as the equivalent of what G.E.R. Lloyd (1987) calls 'polarity', M. Fantuzzi (1983) 'polar thinking', Kemmer (1903) 'polar expression' ('*polare Ausdrucksweise*') and P.F.M. Fontaine (1986) 'dualism'—all of which conceive of the world as being divided into two opposing halves or into two absolutely contrary systems. In reality, this concept deals with the well-known way of reasoning based on pairs of opposites, practised by the Presocratic philosophers (Alcmaeon, Empedocles, Anaximander, Heraclitus, etc.) and continued and developed later mainly by Plato and Aristotle, as has been splendidly illustrated by Lloyd (1987). Special mention, in this sense, should be made of the Pythagorean philosophers, who, according to Aristotle, *Metaphysics* 986 a 23 ff., were the first to establish the series of the ten opposing pairs: limited-unlimited, even-odd numbers, unity-plurality, right-left, male-female, rest-movement, straight-curved, light-dark, good-bad, square-rectangle. Goody ventures the hypothesis that this type of antithetical or polar thought acquires a special relevance in the transition from an oral culture to a written culture.⁸ Lloyd himself has brilliantly studied the role that contrary pairs like right-left, hot-cold and dry-wet play in Greek philosophy,⁹ whereas G. Cambiano (1982) has analysed the relation, as far as polarity is concerned, between the Corpus Hippocraticum and Alcmaeon and Plato. For the role that this method of reasoning plays in disciplines like philosophy, logic, mathematics and medicine, I refer to my (1983).

In the domain of linguistics, and more precisely of semantics, the mode of polar expression or *enantiôsis* is designated by the term 'antonymy', and this is one of the areas of semantics that have received most attention in the last years.¹⁰ Thus, for example, Warczyk approaches the terminological difficulty of the three semantic terms 'antonymy', 'lexical negation' and 'opposition', where nomenclature is conspicuously confused, by establishing criteria for a possible classification of the antonyms into 'exact' and 'approximate', 'full'

⁸ Goody (1977) 135–136.

⁹ Lloyd (1962) and (1964).

¹⁰ Apart from the studies mentioned in my (1983), I particularly recommend the contributions by Warczyk (1981), Dings (1986), López Hurtado (1994), del Teso (1994–1995), Bârlea (2000) and M^a I. Martín Fernández (2002).

and 'partial', 'lexical antonyms' (opposition of words) and 'phraseological antonyms' (opposition of composed units). From the point of view of semantic content, Warczyk speaks of antonyms of 'inverse sense' (great-small), 'contrary sense' (correct-incorrect) and 'contradictory sense' (to see-to be blind). Dings, on the other hand, prefers the typology of 'polar antonyms' (long-short), 'complementary antonyms' (true-false) and 'inverse antonyms' (to be born-to die). Of particular interest is E. del Teso's observation that synonymy and antonymy are, possibly, two of the most intuitive semantic relations that speakers are able to establish between the meaning of words. If the synonymy represents one extreme of the content similarity, "antonymy seems to represent the other extreme of the difference between two terms that almost makes us perceive the one as the negation of the other".¹¹ All of this coincides partly with the opinion of J. Lyons, when he claims not to know "whether the tendency to think in opposites, to categorize experience in terms of binary contrasts, is a universal human tendency which is but secondarily reflected in language, . . . or whether it is the pre-existence of a large number of opposed pairs of lexemes in our native language which causes us to dichotomize, or polarize, our judgments and experiences."¹² López Hurtado insists on the difficulties of establishing a valid definition of antonymy in spite of all the attempts that have been made since ancient times—especially by Aristotle, who, especially at *Metaphysics* 1018 a 20–35, 1018 b 1–8, 1054 a 23 ff. and 1055 a 38 ff., makes the first systematic analysis of the different modalities of opposition, distinguishing contrary (good-bad), contradictory (equal-unequal), correlative (double-half) and positive-privative relations (vision-blindness).¹³ The Romanian scholar G. Bârlea has recently introduced the term *enantiosemia* as a particular case of the manifestation of dichotomising thought. However, he limits this concept, which is in many ways similar to our *enantiôsis*, to those cases of antonymy in the same word—as happens, for example, with the Spanish *álvido*, which originally meant "something very cold" and now also means "something very warm", or *enervar*, which, from "to appease the nerves", has come to mean "to excite the nerves". The most complete work on antonymy that has been published in Spanish recently is the monograph by

¹¹ Del Teso (1994–5) 99.

¹² Lyons (1977) vol. 1, 271.

¹³ See Martínez (1983) 295, building on the work of Anton (1957).

M.I. Martín Fernández. Here we find the widest exposition known to us on the possible types of antonymy; for the present purpose, I am interested in focusing on those of ‘contextual antonyms’ (antonyms created by a certain context), ‘lexical antonyms’ (antonyms of the type married-unmarried), ‘phraseological antonyms’ (antonyms of the type represented in Spanish by the pair *por suerte-por desgracia*) and ‘grammatical antonyms’ (antonyms created fundamentally by means of prefixes, of the type loyal-disloyal).

Indeed these grammatical antonyms—that is, the antonyms with prefixes, to which the study of the opposition of compounds in *eu-* and *dus-* in ancient Greek belongs—allow us to proceed by making some brief observations about the branch of linguistics where this study takes place: the formation of words. Nowadays one tends to regard the formation of words as an independent branch of linguistics, understood as “the entire assembly of resources that has the effect of increasing the lexical volume of a linguistic system from pre-existing linguistic units as already pertaining to that system”.¹⁴ Its battle ground would be the process of creating derivatives, compounds and parasynthesis, conceived of as a means of organising the language so as to extend its vocabulary almost without limits and to adapt it to the requirements and demands of a speaking community. Nevertheless, agreement still does not exist as to where the limits of this branch should be located and whether it should be placed within morphology, within lexicology, or treated as an independent domain.¹⁵ Within the formation of words, prefixes are the generators *par excellence* of antonyms, obtained by the addition of morphemes. By their own semantism prefixes can, in any language, generate a certain number of antonymical pairs, which L. Guilbert (1964) has classified in the following systems for the linguistic study of French:

- (a) System of degrees, of the type *hyper-/hypo-* (hypertension–hypotension)
- (b) System of negation and opposite, of the type *dis-/in-* (Spanish *disculpar-inculpar*), *a-/Ø* (asymmetry-symmetry), *no/Ø* (non commitment-commitment) etc.
- (c) System of quantitative oppositions, of the type *mono-/polu-* (Spanish *monofacético-polifacético*), etc.

¹⁴ Díaz Hormigo (2000) 7.

¹⁵ For Spanish cf. the excellent works of Lang (1992), Alberto Miranda (1994) and Almela Pérez (1999).

- (d) System of oppositions in space and time, of the type *exo-/endo-* (*exogenous-endogenous*), *pre-* / *pos-* (*prewar-postwar*) etc.

For the Spanish language, authors such as Lang and Alberto Miranda speak of 'prefixes of negation' (*a-* / *an-*, *anti-*, *des-* / *dis-* / *de-*, *in-* / *im-* / *i-* etc.), 'locative prefixes' (*inter-*, *super-* etc.), 'temporary prefixes' (*pre-*, *post* / *pos-*), 'prefixes of amount and size' (*bi-*, *multi-*, *semi-* etc.) and 'intensification prefixes' (*extra-*, *hyper-*, *super-* etc.).

The study of the Greek prefixes has been included in my chapter of the composition of words,¹⁶ although I am aware that today it is much argued whether or not prefixation must be considered a field of composition.¹⁷

The pair of compounds in *eu-* and *dus-* would correspond to Guilbert's type (b) and forms part of the system of ameliorative prefixes,¹⁸ or positives and pejoratives, or negative prefixes¹⁹ of ancient Greek.²⁰

From the point of view of *enantiôsis* in the Corpus Hippocraticum, it would be necessary to emphasise three major classes of antonyms:

- (a) 'Lexical' antonyms, that is, relations which occur between simple lexemes, of the type *plêrôsis/plêsmônê-kenôsis* (repletion/satiety-evacuation); *anô-katô* (upwards-downwards) etc.
- (b) 'Phraseological' or 'syntagmatic' antonyms, that is, expressions formed with prepositions, of the type *kata phusin-para phusin* (in accordance with nature-against nature) etc.
- (c) 'Grammatical' antonyms, that is, terms formed with prefixes and preverbs, of the type *epidesis-hupodesis* (tie above-tie down), or *ta prosionta-ta apionta* (what enters-what leaves) etc. This is for us one of the most interesting types of Hippocratic *enantiôsis*, to which the opposition *eu-* / *dus-* belongs, which we are going to deal with next.

The Corpus contains 228 lexemes and 810 contexts for the prefix *eu-*, and these are represented by 140 adjectives (579 contexts), 46 nouns (120), 26 verbs (79) and 16 adverbs (32), in addition to 22 proper nouns (58 contexts).²¹ As for *dus-*, there are there are 90

¹⁶ Cf. Martínez (1997) 39–40 and (2000) 1122–1123.

¹⁷ See for example Almela Pérez (1999) 53.

¹⁸ Well studied by Bader (1969).

¹⁹ For this category in Spanish see Montero (1999).

²⁰ Cf. Martínez (1992a).

²¹ Cf. Maloney-Frohn (1986) and Kühn-Fleischer (1986).

lexemes and 431 contexts, represented by 54 adjectives (232 contexts), 16 nouns (132), 14 verbs (37) and 6 adverbs (30), in addition to 3 proper nouns (3 contexts). This data shows the superiority of the prefix *eu-* over *dus-*, which it doubles in number of contexts and surpasses by more than double the number of lexemes. This does not fail to surprise us, since in the current Spanish medical vocabulary (and, I would imagine, the same probably happens in other modern languages) the opposite occurs: the *Diccionario terminológico* published by Salvat (1974) reviews about 92 terms in *eu-* and almost the double number in *dis-*, whereas in the Quintana Cabanas (1997) the numbers are 25 compounds in *eu-* and about 80 in *dis-*; and the same proportion appears in other technical medical vocabulary.²² In ancient Greek there are some features that differentiate *eu-* from *dus-* in compounds: *dus-* is an inseparable prefix, whereas *eu-* can work like an independent adverb; *dus-* is not documented in Mycenaean, whereas *eu-* already appears in certain numbers of toponyms and anthroponyms;²³ the names of people in *dus-* are relatively few, as opposed to those in *eu-*, which exceed a few hundred. From the point of view of content, some years ago I studied thoroughly the semantics of *dus-* in ancient Greek (1992a) and in the Corpus Hippocraticum (1992b), emphasising that the singularity of these prefixes is their value of indicating “bad”, *dus-*, as opposed to “good”, *eu-* (type *dusmenês-eumenês*, “malevolent-benevolent”), from which other nuances derive, like “difficult” for *dus-*, as opposed to “easy” for *eu-* (type *duscheirôtos-eucheirôtos*, “difficult to dominate-easy to dominate”), or the value of ‘negation’ for *dus-* (type *dusalgêtos-analgêtos*, “painful-painless”), or of “abundance” for *eu-* (type *euandria*, “abundance of men”). In general, it can be said that, in word composition, *dus-* denotes values such as “difficulty”, “disorder”, “imperfection”, “bad state”, “deprivation”, whereas those associated with *eu-* would be “facility”, “being well”, “good state”, “completion”, “abundance”. In any case, a specific semantic study of the prefix *eu-*—a study which, to my knowledge at least, does not exist—could solve problems as those put forward by M. Rosa Aguilar, when she claimed for instance that the translation of *euexiê* for “good complexion” “does not sit well with two words”.²⁴ Sometimes translators are not sufficiently careful when translating these compounds,

²² Cf. the various dictionaries of 1986, 1992, 1999, listed in the Bibliography.

²³ Cf. Bader (1969) 22–23.

²⁴ Aguilar (2002) 140.

which results in two different translations of the same compound in the same context; for example, in the text of *Joints* 82 (4.320 L.): Γόνυ δὲ εὐηθέστερον ἀγκῶνον διὰ τὴν εὐσταλίην καὶ τὴν εὐφυίην, διὸ καὶ ἐκπίπτει καὶ ἐμπίπτει ῥῶον, the Spanish version of Beatriz Cabellos runs: “La rodilla es menos complicada que el codo por su ligereza y buena constitución, de ahí que se disloque y se reduzca con facilidad.”²⁵ The same Greek text is repeated at *Mochlikon* 26 (4.370 L.), and in this case the Spanish version of Helena Torres runs: “La rodilla tiene mejor arreglo que el codo por su conformación sencilla y regular, y por ello también se disloca y reduce más fácilmente.”²⁶ As can be seen, εὐσταλίην is translated in one case as “ligereza” and in another as “simple conformación sencilla”, and εὐφυίην, on the other hand, as “buena constitución” and “conformación regular”. I think that more attention should be paid to these details.²⁷ It is peculiar that in ancient Greek (but not in the CH) both prefixes can appear together in compounds, and consequently we have compounds in *duseu-* (of the type *duseuporistos*, “difficult to try”) and in *eudus-* (of the type *eudusôpêtos*, “easily embarrassed”).

Many of the *dus-* / *eu-* compounds are attested exclusively in the Corpus; thus the contrast *euadês* or *dusdidaktos* appears 29 times in lexemes in *eu-* and 17 times in lexemes in *dus-*, in the CH only. Others, of the type *eualthês*, are attested thereafter, on the basis of the CH (about 18 lexemes in *eu-*). Another group, of the type *dusalloiôtos* and *eudepsêtos*, is attested in the CH and in the works of Galen only; there are about 16 lexemes in *dus-* and about 6 in *eu-* that are of this type.²⁸ Another group of lexemes is formed by compounds in *eu-* (type *eurous*), but not in *dus-*, or in *dus-* (type *dusenteria*) but not in *eu-*. In other cases there are compounds in *eu-* or *dus-* in the CH, but no examples appear in the rest of ancient Greek (compounds of the type *euêthês*, with 19 occurrences in the CH).²⁹ Likewise, a relevant fact

²⁵ *Tratados hipocráticos*, vol. VII, ed. Gredos, Madrid, 1993, 219.

²⁶ *Ibid.*, 245.

²⁷ To my knowledge, Berretoni (1970) 272 ff., Aguilar (2002) 133–142 and Skoda (2002) 380–382 have recently studied semantically some compounds in *eu-* / *dus-* in the Corpus Hippocraticum. For all these compounds, in all ancient Greek, the *Repertorio* of Boned Colera is now very useful (1998), and the existing studies for compounds in *dus-* (pp. 248–250) and *eu-* (pp. 287–292) are mentioned in it. For the compounds in *dus-* one can see now Adrados (2002) as well.

²⁸ See Santana Henríquez (2000).

²⁹ For this compound we recommend the work of López Fêrez (1984b).

is that some words in *eu-* / *dus-* are exclusive to certain works in the CH: 15 contexts of *euchrous* appear only in the *Epidemics* (the total is 17), 21 contexts of *duskolos* in *Coan Prescriptions* (the total is 26). Another group of lexemes is represented in the CH by different classes of words, of the type *dustrapelos-eutrapelia*, but not *eutrapelos*. The ten times when *euphronê* (night) appears set it in contextual antonymy with *hêmêrê* (day). In some cases the compounds in *eu-* / *dus-* appear in certain contexts in synonymic union with another lexeme, for instance in *On Airs, Waters, Places* 16 (p. 62,22 Diller, 2.64 L.), where we see *andreios kai eupsuchos* (brave and spirited). A final characteristic note on compounds in *eu-* / *dus-* in the CH is that both admit of verbal prefixes preceding them, as in *hupodusphoros* or *kateutoneô*, which indicates eagerness for precision—as also happens when a compound appears accompanied by two or more verbal prefixes, e.g. *euexanalôtos*.

A good number of words in *eu-* / *dus-* in the Corpus, represented by forms in both prefixes, of the type *euakestos-dusakestos-anakestos* (“easy to cure”—“difficult to cure”—“incurable”), mean mainly “easy” and “difficult” respectively, and take sometimes an additional *a-* / *an-*, which adds the idea of “negation” or “deprivation”. There are 32 examples of this type in the Corpus Hippocraticum.

Another group of *eu-* / *dus-* compounds are in antonymic opposition with each other in contexts of identical determination, which is why they can be denominated as contextual antonyms; these include the following pairs:

<i>euanasphaltos</i>	<i>dusanasphaltos</i>	<i>Alim.</i> 28.3 (9.108 L.).
<i>euarmostos</i>	<i>dusarmostos</i>	<i>Flat.</i> 6.11 (6.98 L.)
<i>euêlkês</i>	<i>duselkês</i>	<i>Acut.</i> 46. 4 (2.320 L.)
<i>euemblêtos</i>	<i>dusemblêtos</i>	<i>Art.</i> 71.3 (4.292 L.)
<i>euexanalôtos</i>	<i>dusexanalôtos</i>	<i>Alim.</i> 49.2 (9.118 L.)
<i>euêmês</i>	<i>dusêmês</i>	<i>Aph.</i> 4.6–7 (4.504 L.)
<i>euîatos</i>	<i>dusiatos</i>	<i>Art.</i> 14.2 (4.118 L.)
<i>eukritos</i>	<i>duskritos</i>	<i>Aph.</i> 1.12,10 (4.466 L.)
<i>eumetablêtos</i>	<i>dusmetablêtos</i>	<i>Alim.</i> 51.2 (9.118 L.)
<i>eupetesteros</i>	<i>duspetesteros</i>	<i>Morb.</i> 1.22.2 (6.182 L.)
<i>eupnous</i>	<i>duspnous</i>	<i>Prorrh.</i> 2.40.8 (9.70 L.); <i>Coac.</i> 633 (5.732 L.)
<i>eusebeîê</i>	<i>dussebeîê</i>	<i>Morb. Sacr.</i> 3 (6.358 L.)
<i>euphoriê</i>	<i>dusphoriê</i>	<i>Liqu.</i> 1.34 (6.120 L.) and <i>Hum.</i> 3 (5.480 L.)

<i>euphoros</i>	<i>dusphoros</i>	<i>Epid.</i> 6.8.24 (5.282 L.)
<i>euphorôs</i>	<i>dusphorôs</i>	<i>Acut.</i> 36.5 (2.298 L.) and <i>Epid.</i> 1.1.3 (2.610 L.)
<i>euphrosunê</i>	<i>dusphrosunê</i>	<i>Morb. Sacr.</i> 17 (6.386 L.)
<i>euchroos</i>	<i>duschroos</i>	<i>Aph.</i> 5.42.2 (4.546 L.)

On two occasions *enantiôsis* is created not by the opposition *eu-* / *dus-* but by the addition of a new prefix, as happens in the following:

<i>eukatalêptos</i>	<i>euanalêptos</i>	<i>Off.</i> 9 (3.302 L.)
<i>euembatos</i>	<i>euekbatos</i>	<i>Acut.</i> 65 (2.366 L.)

In another group of lexemes, the antonym of a compound in *dus-* is not one in *eu-* but one in *kako-*, which can also be the antonym of a compound in *eu-*. This happens in the following compounds of the Corpus:

	<i>duselkês</i>	<i>kakelkês</i>
<i>eudaimoniê</i>		<i>kakodaimoniê</i>
<i>euodmos</i>		<i>kakosmos</i> / <i>kakodmos</i>
<i>euêthês</i>	<i>kakoêthês</i>	
<i>eutherapeutos</i>	<i>dustherapeutos</i>	<i>kakotherapeiê</i>
<i>eupoieô</i>		<i>kakopoieô</i>
<i>eusitos</i>		<i>kakositos</i>
<i>eutropos</i>		<i>kakotropiê</i> / <i>kakotropeô</i>
<i>euchroos</i>	<i>duschrôos</i>	<i>kakothroos</i>
<i>euôdês</i>	<i>dusôdês</i>	<i>kakôdês</i>

In a good number of contexts we have the opposition *euôdês-kakôdês*.³⁰ It is peculiar that in all the cases this opposition is found in the gynaecological works.

J. Irigoin (1980) has pointed out that any technique that is developed requires the creation of a specialised vocabulary, indispensable for its collective use and transmission. This fact is especially manifest in Hippocratic medicine,³¹ which has its own technical language, with morphological devices (based mainly on derivation and composition) and lexical, syntactic³² and stylistic resources (particularly

³⁰ *On Diseases of Women* 2.123 (8.266 L.); 131 (8.278 L.); 143 (8.316 L.); 145 (8.320 L.); 149 (8.324 L.); *On Sterile Women* 246 (8.460 L.); *On the Nature of the Woman* 3 (7.314 L.), 4 (7.316 L.), 14 (7.332 L.), 18 (7.338 L.), 41 (7.386 L.) and 44 (7.388 L.).

³¹ Cf. López Férez (1984a).

³² Cf. Langholf (1977).

the metaphor), therefore largely obtaining “la creación de un *corpus* léxico autónomo caracterizado en buena medida por la precisión y la exactitud”.³³ And so, an important way to obtain that precision and exactitude in the Corpus Hippocraticum is the ample use that its writers make of the phenomenon of opposites or, in other words, of *enantiösis*. Contrary to what seems to be thought, a global study of this phenomenon is yet to be made. Nevertheless, partial aspects of this study have already been worked upon on a sporadic basis, as we have explained above. In this paper I have only aimed to outline an investigation that could surely occupy many investigators in the future. It is a well-known fact that linguistic studies on the Hippocratic Corpus are not as abundant as those of a different nature, such as literary or of composition, authenticity, medical science, etc. This was already mentioned by J.A. López Férez, when he affirmed that “en el entendimiento y esclarecimiento de los textos médicos griegos creemos que el filólogo y el lingüista tienen un buen campo de estudio en unión con el estudioso de la historia de la medicina y con el filósofo”.³⁴ The prefixes *eu-* and *dus-* in the Corpus play a fundamental role, equivalent in importance to that developed by suffixes like *-ôdês*, *-ma* and *-si*. They are two prefixes that have had an enormous impact on the later development of modern medical terminology, as can be verified by the lexical repertoires of this type of vocabulary that we have previously mentioned (also, in addition, Marcos Pérez (1985)). But it is within the frame of *enantiösis* or pairing of opposites that the vitality of *eu-* and *dus-* in the Corpus Hippocraticum becomes clearer. Thus are fulfilled the wise warnings of J.L. Perpillou (1992) 273, when he claims: “The constitution of antonymic pairs can give way to observations which, limited to one author or one text, seem only to describe an individual stylistic practice or a local particularity, but which, situated in a wider field, appear as the expression of selection or preferences of the same language in the practical organisation of its lexicon.”

³³ López Férez (1984a) 91.

³⁴ López Férez (1987) 263.

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PART FIVE

THE IMPACT AND LATER RECEPTION OF
HIPPOCRATIC MEDICINE

GREEK MEDICAL PAPYRI FROM THE
FAYUM VILLAGE OF TEBTUNIS:
PATIENT INVOLVEMENT IN A LOCAL
HEALTH-CARE SYSTEM?

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Summary

The Greek papyri of medical content from Tebtunis are conspicuous for their quantity and quality, when compared with neighbouring villages. By isolating another feature in which Tebtunis is also unique—namely, in the relatively large number of those of privileged status who maintained residences and left important documents in the village, it would appear that these outsiders were instrumental in interesting the local priests in sophisticated Greek medicine and in bringing medical texts into the village. Tebtunis may thus provide an ancient example of patients influencing the health care available to them and their families when resident in the village.

INTRODUCTION

This paper surveys the Greek papyri of medical content which were excavated at the village of Tebtunis and copied when Egypt was a province of the Roman Empire, from the first to mid-third centuries CE. Chance plays a considerable role not only in the survival of a papyrus to modern times, but also in the order in which a text receives publication. As a result, historical conclusions drawn from the evidence of papyri are by nature tentative, for both excavator and papyrologist may bring to light new texts that by the additional information they offer call for revisions of earlier conclusions. In this instance, however, I believe the amount of data sufficient to set forth a likely scenario that will clarify the process whereby Greco-Egyptian villagers of Tebtunis, a community of farmers and priests in the Egyptian temple at the centre of the village, became interested in reading Greek medical texts; and in addition I will suggest the means

by which they acquired the writings of sophisticated medical authors in the period before Galen came to dominate the medical scene even in the provinces.¹

Papyri of medical content from the Roman period were found in the village by B.P. Grenfell and A.S. Hunt during the winter season of 1899–1900, and while some were published in full in their second volume of *The Tebtunis Papyri* (*P.Tebt.* II),² other papyri were merely described in that volume, receiving full publication only in recent years.³ A few additional *descripta* from Tebtunis will appear in the second volume of the *Corpus of Medical Papyri*, I. Andorlini (ed., forthcoming). A generation or so after Grenfell and Hunt, Italian excavators began to dig anew on the site of Tebtunis, bringing to light and studying not only literary texts in Greek of many genres, including medicine,⁴ but also papyri in the Egyptian language. Full publication of the Demotic texts, the only script in which medical papyri in the Egyptian language were written at Tebtunis, has proceeded more slowly than the editing of those in Greek, and much remains to be done.

A stimulating paper by Peter van Minnen compared ten villages located in the area known in antiquity as the Arsinoite nome with regard to the amount of Greek and Egyptian literature that has to date derived from each village.⁵ The questions van Minnen asked were historical ones, for he wanted to know who was reading Greek literature in the Fayum villages and he hoped to suggest motives for the villagers' tastes in reading during the first three centuries of the Roman period. When van Minnen totalled up the literary fragments in both languages and all genres, Tebtunis led the group of ten vil-

¹ Cf. Hanson (1998) 145–59.

² References to papyri are cited according to *Checklist* (2001); papyri of medical content, according to M-P³ (1997). *P.Tebt.* III 897 has not been included here, because it seems not to have been read in Tebtunis prior to being turned into cartonnage for a mummy. The text was published in full as *P.Bingen* 1 = M-P³539.21: it contains either an aberrant version of the Hippocratic *Regimen* (*De diaeta*) 2.49.2–3, or a commentary to the Hippocratic text, and was copied toward the end of the third century BCE. The papyrus was one of several used in mummy 103, buried in a necropolis of Tebtunis. *P.Tebt.* III 846, also from mummy 103, mentions the *metropolis* of the Arsinoite nome, while the other two documents from the same mummy lack geographical references. Thus it is more likely that mummy 103 was made from papyri discarded in the *metropolis*, rather than a text that was read in the village. Cf. also, van Minnen (1998) 157 and footnote 196.

³ E.g. Andorlini (1995), Marganne (1981), Hanson (2001).

⁴ See the summary in Andorlini (1995).

⁵ van Minnen (1998) 99–184.

lages with ninety-four literary fragments in Greek and 138 literary fragments in Egyptian; in second place was Socnopaeu Nesus with forty literary fragments in Greek and thirty-nine in Egyptian; and in third place was Karanis with sixty-seven literary fragments in Greek and two in Egyptian.⁶ For Socnopaeu Nesus, van Minnen listed no fragments of medical content in Greek and only one in Demotic, a handbook of dentistry.⁷ Although rich in literary texts of many genres, Karanis has yielded, to date, only four pieces of medical content in Greek—a sheet with three medicinal recipes,⁸ a somewhat fanciful set of medical prognostics,⁹ a list of body parts,¹⁰ and a fever amulet to cure Sarapion, whom Allous bore, of a host of fever-chills named in doctorly fashion.¹¹

By contrast, what has come from Roman Tebtunis is plentiful,¹² and compares favourably in quality with medical collections known

⁶ van Minnen (1998) 114. The remaining seven villages surveyed yielded considerably smaller quantities of literary papyri in general and the amount of medical literature found in these seven villages was sparse indeed and seldom of any quality.

Listed below village by village is the total number of literary texts in both languages, followed by a mention of what medical material, if any, was found in each of the remaining seven villages: Narmouthis (sixteen, Greek, and nineteen, Egyptian; a Greek ostrakon with a medical prescription, M-P³2433.21, and a Demotic ostrakon with a medicinal recipe), Theadelphia (twenty-nine, Greek, and one, Egyptian; none medical), Philadelphia (twenty-seven, Greek, and none Egyptian; none medical), Hawara (twelve, Greek, and none Egyptian; none medical), Bacchias (nine, Greek, and none Egyptian; Hippocrates, *Aphorisms* 1.1–2 = M-P³543.1, copied in the second or third centuries CE, likely a school text, and M-P³2356.2, a Greek medical text? in an elegant hand, copied in the third or second centuries BCE), Euhemeria (seven, Greek, and none Egyptian; none medical), Cerceosiris (two, Greek, and none Egyptian; neither medical).

⁷ van Minnen (1998) 153; actually a second Demotic medical text was listed by van Minnen for Socnopaeu Nesus, but the editor of P.Vindob. D 6257, Reymond (1976) 24–29, argues that this extensive papyrus roll most probably derived from the *metropolis* of the Arsinoite nome, not a village.

⁸ M-P³2401, copied on the back of a document in the second- or third centuries CE.

⁹ M-P³2358.01, copied in the third or fourth centuries CE; van Minnen (1998) 136 labelled both this and the preceding M-P³2401 informal copies “of the sort used by doctors”.

¹⁰ M-P³2345.3, copied in the second century CE, and considered a school text by van Minnen (1998) 135.

¹¹ *P.Mich.* XVIII 768, not mentioned by van Minnen (1998), apparently because it is more magic, than medical, and was not assumed into M-P³.

¹² The anonymous medical (?) treatise *P.Tebt.* II 689, T722, copied in the late first to early second century CE in a small, neat uncial, was formerly M-P³2369, but this is no longer thought to deal with medicine.

in the more sophisticated urban centres of Roman Egypt, for the *metropolis* of Oxyrhynchus and the Greek city of Antinoopolis, in particular, were both more populous than the farming villages of the Fayum and remained vigorous for a longer period of time than did Socnopaeu Nesos and many Fayum villages.¹³ Tebtunis with its twelve medical texts in Greek ranks fourth as precise locale in Egypt in which papyri of medical content have been excavated.¹⁴ In the Roman period the Greek city of Antinoopolis has yielded to date twenty-seven medical papyri, many of which were copied during the third to fifth centuries CE and works from the Hippocratic Corpus and Galen predominate. In second place is the *metropolis* of Oxyrhynchus with twenty-three, and twenty-one papyri of medical content were assigned to the entire Arsinoite nome on the basis of indirect evidence, because no more precise information for their find-spot was available. The tacit assumption, however, is that the *metropolis* of the Arsinoite nome is the most likely origin for most of the twenty-one, since villages other than Tebtunis have not yielded many medical texts to excavators, while Antinoopolis, a Greek city, and Oxyrhynchus, a *metropolis* (or capital of an administrative district), were both important sources of Greek medicine.¹⁵

PAPYRI OF MEDICAL CONTENT DISCOVERED AT TEBTUNIS

The medical writings from Tebtunis are conspicuous not only for their quantity, but, as the list below makes clear, many are also important for their quality—numbers 1, 5, 6, 8, 9, 11, and 12 in particular. That is, the collections of recipes listed in numbers 1, 11, and 12 derive from serious receptaria and are far more than miscellaneous jottings of recipes made by doctors in the course of their day-to-day practice; number 5 appears to be a private copy of the *Remedies* of Herodotus medicus, practising at Rome about 100 CE;¹⁶ 6 is, to

¹³ For Oxyrhynchus, see Andorlini (1993) 555, with twenty-three items of medical content listed, and cf. Krüger (1990) 323, 333, and 349; it is likely, however, that many medical papyri found at Oxyrhynchus have yet to be published. For Antinoopolis, Marganne (1984) 117–21. For the abandonment of Socnopaeu Nesos in the third century CE, van Minnen (1995) 41–56.

¹⁴ Andorlini (1993) 467 and 555.

¹⁵ Marganne (2001) 60 also compares the medical texts found at Tebtunis favourably with those from Antinoopolis.

¹⁶ Cf. Marganne (1981) 73–78 and Touwaide (1998) 476.

date, the earliest copy of an illustrated herbal; 8 gives full discussion of maladies, such as catarrhs, and 9 is an extensive manual of pulmonary diseases that intersperses symptoms and diagnostics with medicaments, perhaps composed in the I CE.

Greek medical texts from Tebtunis. In parentheses are the T-numbers written on the papyrus by Grenfell and Hunt. ¹⁷	Assigned date of copying	M-P ³ number	Publication information
1. Extensive collection of ophthalmologic prescriptions and collyria in at least three cols.	Late I BCE; rapid cursive; written on the back of a Demotic astronomical text.	2419.2	<i>PSI Congr.</i> XXI 3
2. Commentary to Nicander, <i>Theriaca</i> 526–29.	First century CE; elegant cursive of a professional scribe; document on back.	1328	<i>P.Mil.Vogl.</i> II 45 + VI 262
3. Small fragment with three (?) recipes.	First-second centuries CE; carelessly written; a doctor's jotting (?).	2422.1	<i>P.Tebt.Tait</i> 43r

¹⁷ Grenfell and Hunt affixed a letter followed by a number to many of the papyri they found in Egypt: thus, “T” designates “Tebtunis,” and “E,” “Euhemereria,” etc. Less clear is the significance of the numbers: T-numbers do not seem to represent specific houses in Tebtunis, as implied by the Berkeley data base (<http://sunsite.berkeley.edu/APIS/database.html>), but rather individual papyri. The Tebtunis papyri housed in the Bancroft Library, University of California, Berkeley, bear T-numbers from T1 to T730, with gaps in the sequence; contents sometimes suggest that papyri with adjacent T-numbers involved members of the same family—for specific examples, see Verhoogt (1998) 141–154 and Hanson (2001) 601–604. The matter is by no means resolved, although the T-numbers listed in the chart (T26 = 6, T42 = 10, T43 = 9, T264 = 8, T423 = 5) suggest two things: first, that numbers 9 and 10 may have been the possession of a single person or family; second, the wide spread in these T-numbers (T26 to T423) implies that as a group the medical texts were the possession of more than a single person or family.

The T-numbers for census declarations excavated by Grenfell and Hunt that will be discussed below are listed here to facilitate comparison with the T-numbers affixed to the medical texts: T107, *P.Tebt.* II 322 (187-Ar-22); T143, *P.Tebt.* II 481 ii and i (159-Ar-21, 159-Ar-22, cf. *SB* XX 14164); T206, *P.Tebt.* II 522 (131-Ar-6, cf. *SB* XII 10842); T231, *P.Tebt.* II 566 (131-Ar-7, cf. *SB* XX 14163); T335, *P.Tebt.* II 518 (187-Ar-31, cf. *SB* XX 14166); T496, *P.Tebt.* II 321 (145-Ar-11); T512, *P.Tebt.* II 480 (201-Ar-10, cf. *SB* XX 14167 and *BL* XI 228); T562, *P.Tebt.* II 504 (187-Ar-23, cf. *SB* XX 14165); T571, *P.Tebt.* II 446 (215-Ar-8, cf. *SB* XX 14168). None of these T-numbers seem sufficiently close to the ones affixed to the medical texts to suggest that the declarants of census submissions were also owners of specific medical texts.

4. Very small fragment, perhaps with gynaecological recipes (<i>ekbolio[n]</i> in line 12); poor quality papyrus	Late first-early second century CE; careless, fast cursive; a doctor's jotting (?).	2422.2	<i>P.Tebt.Tait</i> 44r (perhaps same roll as <i>P.Tebt.Tait</i> 43r)
5. Herodotus medicus, <i>Remedies</i> (<i>De remediis</i>), cf. Oribasius, <i>Collectiones medicae</i> 5.30.6–7. (T423)	Second century CE; small, neat uncial; written on the back of accounts.	484.1	<i>P.Tebt.</i> II 272v + Marganne (1981) 73–78
6. Illustrated herbal, with schematic drawings of plants discussed. (T26)	Second century CE; neat, but somewhat cursive bookhand.	2094	<i>P.Tebt.</i> II 679 + <i>P.Tebt.Tait</i> 39–41r; cf. Hanson (2001) 585–604
7. Small, seven-line fragment of an herbal.	Second century CE; does not join the previous ¹⁸	2094.1	<i>P.Tebt.Tait</i> 42
8. Anonymous treatise in at least four cols., describing symptoms of ailments such as “catarrh”. (T264)	Second CE; attractive bookhand	2368	<i>P.Tebt.</i> II 678
9. Anonymous therapeutic manual in at least eight cols., dealing with pulmonary diseases. (T43) ¹⁹	Second century CE; clear, but at times irregular, professional hand	2386	<i>P.Lund</i> I 6 ²⁰ + <i>P.Mil.Vogl.</i> I 16 + <i>P.Tebt.</i> II 677 + PSI inv. 3054, for which, see now Andorlini (1995)
10. Anonymous treatise of astrological medicine, with refs. to premature birthing (line 11) and to <i>embryotomia</i> (line 14) (T42)	Second century CE; careful bookhand with individual articulation of letters	2366	<i>P.Tebt.</i> II 676

¹⁸ Tait (1992) 309 and note 32.

¹⁹ Of the three planetary tables from Tebtunis belonging to the Egypt Exploration Society and housed in the Ashmolean Museum, one was also inscribed “T43,” according to Jones (1998) 216.

²⁰ The editor of the first papyrus to be published, *P.Lund.* I 6, associated the manual with Apollonius Mus, a late first century BCE medical writer, on the basis of similarities between the papyrus and the fragments of Apollonius preserved by Galen and others—for a list of which, see van Staden (1989) 552–554. The identification of Apollonius Mus as author of the manual was rejected by Andorlini (1995) 40–55. *P.Mil.Vogl.* I 16 was earlier catalogued as P²2387 and *P.Tebt.* II 677 as P²2367.

11. Extensive collection of recipes in at least six cols. to medicate diseases of the eye (collyria), skin, and hair	Second century CE; written in a casual and irregular hand	2421	<i>PSI</i> X 1180 = I. Andorlini (2004) 81–118
12. Extensive collection of recipes in at least eight cols., all of them apparently <i>collyria</i> . (No T-number)	Second-third century CE; written on the back of a tax report	2422	<i>P.Tebt.</i> II 273

To date, Tebtunis has also yielded many literary texts written in the various Egyptian scripts, although only a few have been published in full. Of the some eighty items about which there is some information, three have medical content.

Contents of Egyptian medical texts written in the Demotic script ²¹	Assigned date of copying	Publication information
13. Extensive fragments of a systematic herbal, with each section devoted to a single herb; no illustrations; a Demotic document on the back	Second half of second century CE	<i>P.Carlsb.</i> inv. 230; <i>P.Carlsb. dem.</i> I, p. 47 + <i>P.Tebt.Tait</i> 20
14. Medical recipes	Second-third century CE; smallish characters; poor quality papyrus	<i>P.Tebt.Tait</i> 18
15. Magico-medical treatise	First half of third century CE; coarse papyrus and more carelessly written than <i>P.Tebt.Tait</i> 18	<i>P.Tebt.Tait</i> 19

The difference between Tebtunis, on the one hand, and Socnopaeu Nesus and Karanis, on the other, as regards the quantity and quality of the medical texts found in each of the villages, is considerable. Van Minnen's focus was Greek literature of all genres and he wanted to precise who were the owners of the literary texts. He concluded from the poor quality of the hands that wrote the Greek and from the fact that the backs of papyri were often employed that a

²¹ Drawn from the list in van Minnen (1998) 170–178.

fairly large number of the literary items from Socnopaeu Nesos derived from a school context—Hesiod, some of the Homer, the Menander anthologies, and the many mathematical works.²² Most literary texts from Karanis were found during controlled excavations, first by the Egypt Exploration Society and later, between 1924 and 1935, by excavators from the University of Michigan. As a result van Minnen could point to three residents of Karanis who were not only owners of literary texts, but were in addition individuals about whom something was known from the documents also found in the ruins of their houses: a veteran and Roman citizen, C. Iulius Niger, who possessed some Homer, a work of logic, and a poem with musical notations; a collector of money taxes named Socrates of village status, who possessed copies of Callimachus' *Aitia* and Menander's *Epitrepontes*; and a family of priests in one of the Egyptian temples, also of village status, that possessed some Demosthenes, Herodotus, and Plato.²³

Grenfell and Hunt provided little information about the loci at which they found papyri at Tebtunis—only the T-numbers they wrote on papyri unearthed in the village and their observation that some papyri, both literary and documentary, were found in houses within the area of the temple of Suchus (“Sobek” in Egyptian), the crocodile god of the Fayum referred to in Tebtunis as Socnebtunis.²⁴ Isabella Andorlini amplified this information with reports by Italian excavators from the mid-1930's and sporadically from the 1970's to the 1990's, all of which underscored the fact that papyri, as well as objects useful in the preparation and administration of medicaments, were also found within the temple precinct, including numerous small wooden containers for storing unguents and powders.²⁵ To the evidence already assembled about the priests of Tebtunis as likely owners of Greek literature, van Minnen juxtaposed the Greco-Egyptian priestly family of Karanis, concluding that priests in temples dedicated to Egyptian gods were becoming avid readers of Greek literature in the centuries following the Roman takeover, despite the fact that such

²² van Minnen (1998) 145–52; cf. also Harrauer and Worp (1993) 35–40.

²³ van Minnen (1998) 123–36.

²⁴ For the T-numbers, see above, footnote 17; for the remarks of Grenfell and Hunt, *P.Tebt.* II, pp. 54–55.

²⁵ Andorlini (1995) 6–10.

reading was not immediately relevant to their priestly activities.²⁶ Priests at Socnopaeu Nesus and Karanis were also reading Greek literature, yet nothing to date suggests that sophisticated medical texts were prized in these two villages, nor in any of the other villages of the Arsinoite nome. The appetite for texts of Greek medicine had been whetted only, it would seem, at Tebtunis.

COMPARISON OF THE RESIDENTS OF TEBTUNIS, SOCNOPAEU NESUS AND KARANIS

Although the three villages share many common features, there are also conspicuous differences—in size (Karanis was by far the largest and Tebtunis larger than Socnopaeu Nesus); in longevity (Socnopaeu Nesus was deserted by its inhabitants around the middle of the third century CE, Tebtunis not long after the end of the third century, and Karanis in the later fifth century); in contrast, Tebtunis had apparently become the regional capital Theodosiopolis during the fifth century);²⁷ in location within the Fayum (Tebtunis in the southwest in Polemon division; Socnopaeu Nesus in the northwest on the shore of Lake Moeris and Karanis in the northeast, both in Heraclides division); in the influence priests in the Egyptian temples had within the community (best gauged by the number of texts in the Egyptian language found in the village, with Karanis yielding only two, as compared to 138 at Tebtunis and thirty-nine at Socnopaeu Nesus); and in the number of those whose status in Roman eyes was more exalted than that of the majority population, the peasant villagers, and who, despite their privileged status, were nonetheless maintaining a residence in Tebtunis or Karanis, as the documents they left behind them in the two villages make clear.

Socnopaeu Nesus never attracted outsiders, nor did Romans and Greeks of privileged status establish residences there, as they did at

²⁶ For evidence that the literary texts were private possessions of the priests at Tebtunis, rather than part of a temple library, see Hanson (2001) 601–604, van Minnen (1998) 168, and Tait (1992) 306–307.

²⁷ van Minnen (1995) 41–56, although his attention is focused on Socnopaeu Nesus and Karanis is mentioned only incidentally. The Heidelberg Gesamtverzeichnis (<http://www.uni-heidelberg.de/institute/fak8/papy/hagedorn/>) lists 853 documents from Tebtunis securely dated to the years 1–297 CE (*P.Michael.* 24 is the latest), but there are none securely dated to the fourth century.

Tebtunis and Karanis, apparently because the former village possessed only scant arable land in close proximity.²⁸ The villagers themselves exploited farm lands on the opposite southern shore of Lake Moeris near the villages of Apias and Heracleia, or further to the northeast in the vicinity of Bacchias, in order to meet their own needs for grain and to fulfil their obligations in kind to the tax collectors. The largest contingent of non-residents attested at Socnopaeu Nesus consisted of those who plied the caravan routes through the desert, entering and exiting the Fayum through the customs' house in the village with their goods piled on donkeys and camels.²⁹ A certain xenophobia, with regard to the more Hellenised residents of the *metropolis* of the Arsinoite nome, seems apparent in the petition sent in 137 CE by two villagers of Socnopaeu Nesus to the chief representative of the Roman government in the Heracleides division of the nome:

... A certain Horion came down to our village and persuaded us to go up to the *metropolis* and buy wheat from his father, Stotoetis nicknamed "Small"; and taking three hundred silver drachmas from us to give his father as the price of the wheat he disappeared, carrying off also a box of mine in which there was a new corselet. But when we went to his father about the grain, he said he had not received any money and did not know where his son was. We therefore request that this petition remain filed in your office in case he may appear and his father also be brought before you, in order that we may receive the justice which emanates from you...³⁰

The census declarations submitted to Roman authorities, however, appear to provide a more reliable basis on which to compare Tebtunis, Socnopaeu Nesus, and Karanis, for these documents clarify the status of persons maintaining a residence in the respective villages, whether as owners of the property, or those who lived in the houses of others. Declarants identified themselves, explaining whether they were peasant villagers liable to capitation taxes at the highest rate, or citizens of the *metropolis* of the Arsinoite nome, paying capitation taxes at half the rate paid by villagers, or citizens of Antinoopolis, the city founded in 130 CE by the emperor Hadrian some 150 kilometers to the

²⁸ The evidence is collected in Hobson (1981) 389–403, Hobson (1984) 89–109, Hobson (1982) 80–123, and Hobson (1985) 101–115.

²⁹ See the thorough investigation of the internal customs' houses in the Fayum and elsewhere in Egypt by P.J. Sijpesteijn (1987).

³⁰ The petition is known in two copies, *P.Grenf.* I 28 (reprinted as *M.Chres.* 109) and *P.Brook.* 3.

south of the Arsinoite nome in the Nile valley in memory of his favourite Antinoos. In common with the other three cities that were organised in accordance with a Greek-style constitution (Alexandria on the Mediterranean coast, Naucratis in the Delta, and Ptolemais in Upper Egypt), the citizens of Antinoopolis were ranged by tribe and deme and they enjoyed many privileges available to neither peasant villagers nor metropolites.³¹ Antinoopolites paid no capitation taxes, nor did Roman citizens, and were immune from performing liturgies in any community but Antinoopolis, despite the fact they frequently owned property elsewhere. While Roman officials were collecting information about the population of their new province and ranging them in hierarchical categories already in the reign of Augustus and by the end of the reign of Tiberius were censusing Egypt in fourteen-year cycles (the census would remain quattuordecennial until 257/58 CE, the date of the last census in the old style), only in the second and early third centuries do census submissions found at Tebtunis, Socnopaeu Nesus, and Karanis become plentiful enough to make the comparison meaningful, and only declarations submitted between 103 CE and 215 CE have been tallied here.³² Of the eighteen submissions from Socnopaeu Nesus published up to now, all were submitted by those of village status and eleven of the declarants identified themselves as priests in the village's Egyptian temple. No declaration mentioned property owned outside the village, nor did any declarant indicate that his official residence (*idia*) was elsewhere than Socnopaeu Nesus—no Roman citizens, no Antinoopolites, no metropolites submitted and left a declaration behind them in Socnopaeu Nesus.³³

³¹ It might be argued that because Socnopaeu Nesus has not been excavated with the systematic thoroughness brought to bear at Tebtunis and Karanis, declarations from outsiders have lost their connections to Socnopaeu Nesus. Still, the number of submissions from villagers only at Socnopaeu Nesus, as opposed to those from villagers of Tebtunis and from outsiders who maintained residences in Tebtunis is significant enough to overcome the argument.

³² For the history and mechanics of the Roman census in Egypt, see Bagnall and Frier (1994) 1–30.

³³ The census declarations from Socnopaeu Nesus are listed according to their appearance in the catalogue of Bagnall and Frier (1994) 179–312, with the first number being the year in which the census was declared; “Ar-” stands for “Arsinoite nome”, and the final number, the rank held by the declaration among Arsinoite submissions for the particular census year: 103-Ar-10, 117-Ar-7, 131-Ar-9, 145-Ar-20, 159-Ar-13, 159-Ar-20, 159-Ar-23, 173-Ar-2, 187-Ar-2, 187-Ar-28, 187-Ar-29, 187-Ar-add (see *SB* XX 15010, published after the Bagnall and Frier catalogue), 215-Ar-2, 215-Ar-3, 215-Ar-4, 215-Ar-5, 215-Ar-6, ??-Ar-3.

By contrast, perhaps as much as fourteen percent of the population of Karanis in the second and early third centuries CE consisted of veterans who possessed Roman citizenship by the time of their release from military service, if not before.³⁴ Many of the veterans seem to have been in origin natives of Karanis who returned to the village upon discharge. While these men were privileged in Roman eyes and able to make use of Roman legal forms, they were not as a group conspicuously wealthy. Rather, while some veterans did belong to the wealthier stratum of Karanis society, not all did.³⁵ Nonetheless, the comparative prosperity some veterans enjoyed was as likely due to their assumption of legacies and inheritances from relatives locally, as to their military service.³⁶ Because Roman citizens paid no capitation taxes, they made no declarations of their own person to census officials, although they did declare ownership of property, for it was taxed. Evidence of their presence in Karanis can be seen not only in the houses whose ownership they affirmed, but their non-citizen wives (to whom veterans were joined in a union not recognised by Roman law until the reforms of Septimius Severus in 197 CE) declared themselves and the children of the union, said throughout the second century to be “fatherless” (*apatores*) and required to follow the status of their mother.³⁷ Of the twenty-five declarations from Karanis thus far published, some fourteen were submitted by those of village status, while at least another six involved property owned by Roman citizens—houses and slaves located in the village, but also others located in the *metropolis* of the nome. Nonetheless, the submissions from villagers and veterans alike were unearthed at Karanis, left behind by their owners in the houses together with their other important documents and literary texts.³⁸ There is also

³⁴ For the veteran population of Karanis, see Alston (1995) 117–142, and for the population figures, 121–123.

³⁵ Geremek (1969) 56–58.

³⁶ Alston (1995) 137–142.

³⁷ Alston (1995) 53–56, and for the children of veterans, Youtie (1975) 723–740.

³⁸ The census declarations from Karanis are listed according to their appearance in the catalogue of Bagnall and Frier (1994) 179–312 (cf. footnote 33 above): 103-Ar-9, 117-Ar-add (see *SB* XXII 15811, published after the Bagnall and Frier catalogue), 131-Ar-add (see *SB* XXII 15704 and cf. *BL* XI 204, published after the Bagnall and Frier catalogue), 145-Ar-12, 145-Ar-13, 145-Ar-14, 145-Ar-15, 145-Ar-16, 159-Ar-7, 159-Ar-8, 159-Ar-9, 159-Ar-10, 159-Ar-11, 159-Ar-12, 173-Ar-8, 173-Ar-9, 173-Ar-10, 187-Ar-24, 187-Ar-25, 187-Ar-26, 187-Ar-27, 201-Ar-8, 201-Ar-9, 201-Ar-add (see *SB* XXII 15810, published after the Bagnall and Frier catalogue), 215-Ar-1.

a declaration from a woman with citizenship in Antinoopolis. As Richard Alston has argued, at least one veteran resident in Karanis made it clear that he deemed his Antinoopolite status of greater importance to him than his Roman citizenship, when trying to gain the attention of authorities and exercise the privileges Antinoopolite status afforded him, for this Greek-style city possessed a political structure that the veteran community lacked.³⁹ The veteran enclave did contribute to the Hellenisation of Karanis, for little has come from the village written in the Egyptian language, whether literary text or document; and, as van Minnen's survey makes clear, at least one veteran can be identified as an owner of some of the Greek literature found in the village. Still, there is little indication that the population of Karanis, wealthy or not, was reading medical texts of the degree of sophistication that marked the reading taste at Tebtunis.

Of the twenty-eight census declarations unearthed at Tebtunis and thus far published, at least fourteen were submitted by villagers, two of whom identified themselves as priests.⁴⁰ Ten declarations, however, were from those with metropolitan status, and three from those with Antinoopolite status. The privileged Antinoopolites and metropolitans were declaring ownership of houses—some in Tebtunis and occasionally inhabited by local villagers, perhaps family retainers, or in nearby villages, and other houses in the *metropolis* and Antinoopolis. The metropolitans declared their person, as they sometimes mentioned, in other submissions that had to be presented in the *metropolis* to officials of the census office there. Antinoopolites enjoyed obvious marks of their “Greekness”, beginning with the tribal and demotic affiliations they attached to their names, reminiscent of the civic classifications operative at Athens centuries earlier. Important metropolitans advertised their inclusion among “the 6475 Hellenes of the Arsinoite nome”, or their membership in the gymnasium of the *metropolis*. As

³⁹ Alston (1995) 65–68, 130–132, and 141–142.

⁴⁰ The census declarations from Tebtunis are listed according to their appearance in the catalogue of Bagnall and Frier (1994) 179–312 (cf. footnotes 33 and 38 above): 103-Ar-2, 103-Ar-13, 131-Ar-6, 131-Ar-7, 131-Ar-8, 131-Ar-add (*SB XXIV* 16012, published after the Bagnall and Frier catalogue), 145-Ar-1, 145-Ar-2, 145-Ar-3, 145-Ar-4, 145-Ar-11, 159-Ar-21, 159-Ar-22, 173-Ar-add (*P. Strasb.* VIII 768, corrected after the Bagnall and Frier catalogue, cf. *BL VIII* 432 and XI 257), 187-Ar-19, 187-Ar-20, 187-Ar-22, 187-Ar-23, 187-Ar-30, 187-Ar-31, 187-Ar-32 (cf. *BL XI* 213), 187-Ar-add (*SB XXIV* 16014, published after the Bagnall and Frier catalogue), 201-Ar-1, 201-Ar-2, 201-Ar-3, 201-Ar-6, 201-Ar-10, 215-Ar-8.

Naphtali Lewis has vividly underscored, those of privileged status throughout Roman Egypt “persisted in flaunting their ties, real or imagined, to Hellenism”, and the privileged who spent time in Tebtunis were no different.⁴¹ Whatever their connections to the world beyond the village, just under half of the census submissions actually found at Tebtunis were submitted by those of privileged status, yet both they and the villagers were storing these and other important papers in Tebtunis, leaving them behind to document their presence. How long members of an elite family remained in Tebtunis is, of course, unknown, but the men of the family would of necessity have returned from time to time to the urban centre that was their official residence (*idia*) and which served as the locus of their privileged status, in order to conduct official business and perhaps to attend to private affairs.

PATIENT INVOLVEMENT IN THE HEALTH-CARE SYSTEM OF TEBTUNIS

Because of their necessary contact with the more sophisticated urban communities, it seems likely that they were the ones responsible for importing much of the Greek literature discovered in Tebtunis, some items perhaps for their own use and other items for interested villagers, including priests of Socnebtunis.

The privileged families acquired property in Tebtunis and its environs during the Roman period, because arable land was plentiful and productive, so long as the canal that serviced the area was kept in good repair. The houses they owned in the village, or in neighbouring villages, were sometimes said to be empty of inhabitants, perhaps purposely kept vacant in anticipation of the family’s occasional arrival; even the villagers who were living in houses owned by metropolitans and Antinoopolites may have been family retainers, rather than renters, keeping the property in good condition for visits from the owners. The dry climate of Tebtunis would have been particularly attractive to the outsiders during winter months, for the *metropolis* was located in a depression at the centre of the Arsinoite nome

⁴¹ For the quote, see Lewis (1983) 39; see also his overviews of the privileges and habits of metropolitans, 36–64, and of Antinoopolites, 25–29; for Antinoopolis, in particular, see also the summary in Boatright (2000) 190–196.

at the juncture of several feeder canals, and Antinoopolis was built on the Nile itself. To be sure, the productive fields of Tebtunis were also irrigated by a canal, but beyond that canal lay the desert that enveloped the village when its agricultural regime was no longer maintained some centuries after the Arab conquest and the latest archaeological remains found by the Franco-Italian excavators, active at the site from 1988 to the present. It may be no accident that two of the more extensive Greek medical texts (items 8 and 9 in the chart above) concerned pulmonary complaints, for Tebtunis was likely to have been warmer and drier in winter than either the *metropolis* or Antinoopolis. The village may have served as a refuge from the dampness and chill of the rainy season for a family's less robust members.

It seems to me likely, then, that the outsiders from the urban centres were the ones who interested the priests of Socnebtunis in the more sophisticated items of Greek medical literature that excavators found there. By making such texts available to the priests, already in the habit of practising medicine among the villagers, they were providing for themselves and family members medical attentions more in keeping with the health care they enjoyed in their official residences in the *metropolis* or Antinoopolis. If this be the case, then Tebtunis in the Polemon division of the Arsinoite nome provides for the ancient world an example of patient involvement in the health care they received in the village, whether they arrived only sporadically, or came for lengthy stays. While I am quite certain this is by no means the only example of the phenomenon, it is the clearest and most persuasive example I have found to date.

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CELSUS AND THE HIPPOCRATIC CORPUS: THE ORIGINALITY OF A 'PLAGIARIST'¹

Muriel Pardon

Summary

A study of all the passages connected to lippitudo and ophthalmia—Latin compilers used these two terms to refer to one and the same eye disease—shows that while Celsus claims to be a follower of Hippocrates, he does not mention some of the explanations which appear in his main sources. He both clarifies and completes the prescriptions of the 'Father of Medicine'. It can therefore be said that the De Medicina is a descendant of the Hippocratic Corpus in the same way as La Fontaine's Fables are a descendant of Aesop's.

We could regard Celsus as *mediocri uir ingenio*,—"a man of very ordinary ability".² According to Wesley D. Smith, "Celsus makes extensive use of the Hippocratic Corpus in the body of his work. His presentation of surgical procedures in book 8 is almost wholly a digest from the surgical works of the Corpus. In his presentation of dietetics and in the descriptions of symptoms and treatments of disease, there are frequent unacknowledged quotations from Hippocratic works."³

Nevertheless, by studying two passages, one by Celsus, the other from the Hippocratic Corpus,⁴ Philippe Mudry has shown how Celsus built on Hippocrates' earlier achievements. In his introduction to his translation of the first and second books of the *De Medicina*, Guy Serbat has also emphasised the Latin writer's stylistic originality: Celsus rearranges Hippocrates' ideas in an original way and uses a

¹ I would like to thank especially my friend Florence Milan for her translation of this paper as well as Professors Danielle Gourevitch, Directeur d'Études à l'EPHE, and Jean-Yves Guillaumin, for their suggestions.

² Quintilian, *Institutio oratoria* 12.11.24. The text and the translation of the passage are from D.R. Russel's edition (2001). For more articles on this subject, see Mudry (1993) 794.

³ Smith (1979) 229.

⁴ Mudry (1991) 257–269.

personal tone. According to the philologist, "It would be illuminating to take a closer look at what Celsus rejected from a composite Corpus in which 'medical' conceptions reflecting the thinking of cosmologist philosophers from the fifth and sixth centuries are placed side by side with views of an apparently more recent rational empiricism."⁵ All the passages that mention *lippitudo* and *ophthalmia*,—two terms that refer to one and the same disease for Celsus⁶—, form two equal corpora as far as quantity is concerned:⁷ their analysis shows how the so-called "compiler" uses Hippocratic aetiologies, prescriptions and nosography. The study of two apparently very close passages therefore confirms that it is necessary to bring back the *De Medicina* into favour.

The aetiologies of *ophthalmia*⁸ and *lippitudo*⁹ emphasise both similarities and differences between the two corpora. We can indeed consider that Celsus paraphrases the passages dealing with the seasonal conditions leading to the outbreak of disease. Here is for example what the encyclopaedist writes about dry boreal winter: "If a dry winter has been accompanied by northerly winds, or again a spring by southerly winds and rain, generally there ensue runnings from the eye, dysenteries, fevers, and most of all in more delicate bodies, hence especially in women."¹⁰ This text is suspiciously reminiscent of the following Hippocratic passages: "As for the seasons, if the winter be dry and northerly and the spring wet and southerly, of necessity occur in the summer acute fevers, eye disease and dysentery, especially among women and those with moist constitutions"; "If, on the other hand, the winter prove dry and northerly, the spring rainy and southerly,

⁵ "Il serait très éclairant d'étudier de près ce que Celse n'a pas retenu d'un Corpus composite, où des conceptions 'médicales' reflétant la pensée des philosophes cosmologues des VI^e et V^e siècles voisinent avec des vues d'un empirisme rationnel apparemment plus récent.", Serbat (1995) XXV (my translation).

⁶ Celsus assimilates "a kind of dry lippitudo" to what the Greeks call "dry ophthalmia": *genus aridae lippitudinis: xeroptalmian* (Cels. 6.6.29).

⁷ The research with truncation programme in versions 1.0 e of *TLG* and *TLL* gives twenty-one occurrences for *ophthalmi-*, and in *TLL*, twenty-six for *lipp-*.

⁸ About the term *ophthalmia*, see Sichel (1837); Andreae (1843); Hirschberg (1899–1918) 68–76, 341–343; Magnus (1901) 31; Pearlman (1969) 1069–1076; Vos (1970) 231–241; Marganne (1994) 3–4.

⁹ About the term *lippitudo*, see Pokrowskij (1899) 244–249; Hirschberg (1899–1918) 247–248; Magnus (1901) 263; Daude (1985) 14, 137–154, 295, 539–567, 862–880, 1245–1273; Limmer and Krieglstein (1992) 89–95; Langslow (2000) 218, 227, 232, 239, 242, 248, 249, 256, 258, 310.

¹⁰ Cels. 2.1.13, tr. W.G. Spencer (1935) 92. The text of Celsus' *De Medicina* we are referring to is from Fr. Marx's edition (1915).

the summer cannot fail to be feverladen, causing ophthalmia and dysenteries.”¹¹ The same kind of observation could be made about rainy austral winter,¹² dry boreal autumn,¹³ spells of rain¹⁴ or drought.¹⁵ We can also wonder why modern translations do not always use the same word for *ophthalmia* and *lippitudo*. Nevertheless, passages dealing with epidemic diseases¹⁶ or bilious patients¹⁷ are nowhere to be found in the *De Medicina*. These changes may be due to diverging sources, to a didactic project or to a new perception of the eye disease to which the terms *ophthalmia* and *lippitudo* refer.

The treatments for the disease express the same relative originality. Like Hippocrates, Celsus acknowledges the usefulness of diarrhoea¹⁸ and fever,¹⁹ but he also recommends, in some cases, cold water²⁰ and

¹¹ Hp., *Aph.* 3.11 (p. 124,11 Jones; 4.490 L.); *Aer.* 10.3 (p. 98,15 Jones; p. 212,6 Jouanna; 2.42 L.).

¹² Cels. 2.1.14: “If on the other hand south winds and rain have prevailed during winter, and the spring is cold and dry, [. . .] Other people are attacked by dry ophthalmia, and if elderly by choked nostrils and runnings from the nose.”

¹³ Hp., *Aph.* 3.14 (p. 126,5 Jones; 4.492 L.): “But if <the autumn> be northerly and rainless it is beneficial to those with moist constitutions and to women. To the others will come dry eye diseases, acute fevers, colds and, in some cases, melancholia”; Cels. 2.1.16: “But if the autumn is dry owing to a north wind continuing to blow, all those with more delicate bodies, among whom, as I have mentioned, are women, enjoy good health. The harder constitutions, however, may possibly be attacked by dry ophthalmias, and fevers, some acute, some chronic, also by those maladies which arise from black bile.” (p. 93 Spencer)

¹⁴ Hp., *Aph.* 3.16 (p. 126,13 Jones; 4.492 L.): “The diseases which generally arise in rainy weather are protracted fevers, fluxes of the bowels, mortifications, epilepsy, apoplexy and angina”; Cels. 2.1.6: “In spring those diseases are usually to be apprehended which are stirred up anew by movement of humor. Consequently there tend to arise running from the eyes, pustules, haemorrhages, congestions in the body, which the Greeks call *apostemata*, black bile which they call *melancholia*, madness, fits, angina, choked nostrils, running from the nose.” (p. 89 Spencer).

¹⁵ Hp., *Aph.* 3.21 (p. 128,22 Jones; 4.494 L.): “In summer occur some of the diseases just mentioned, and also continued fevers, ardent fevers, tertians, vomiting, diarrhoea, eye diseases, pains of the ears, ulcerations of the mouth, mortification of the genitals, sweats”; Hp., *Aph.* 3.16 (p. 126,13 Jones; 4.492 L.): “In dry weather occur consumption, eye diseases, diseases of the joints, strangury and dysentery”; Cels. 2.1.12: “In times of drought there arise acute fevers, running from the eyes, dysenteries, urinary difficulty, articular pains.” (p. 91 Spencer).

¹⁶ Hp., *Aer.* 4.3 (p. 78,3 Jones; p. 194,3 Jouanna; 2.20 L.); *Epid.* III 3.3 (p. 240,6 Jones; 3.78 L.); *Aph.* 3.16 (p. 126,13 Jones; 2.492 L.)

¹⁷ Hp., *Aer.* 10.6 (p. 100,18 Jones; p. 214–215 Jouanna; 2.46 L.); 10.12 (p. 98,16 Jones; p. 218,5 Jouanna; 2.50 L.).

¹⁸ Hp., *Epid.* II 12 (p. 84,11 Smith; 5.134 L.); *Aph.* 6.17 (p. 182,20 Jones; 4.466 L.); *Coac.* 220 (5.632 L.); *Judic.* 60 (9.294 L.); Cels. 2.8.14.

¹⁹ Hp., *Coac.* 218 (5.632); Cels. 6.6.1d.

²⁰ Cels. 1.5.1.

heat.²¹ Although he regards Hippocrates as the oldest authority²² he does not hesitate to comment on the great master's prescriptions. As a matter of fact, the aphorism telling that "pains of the eyes are removed by drinking neat wine, by bathing, by vapour baths, by bleeding or by purging"²³ gives rise to the following comment: "According to Hippocrates, the oldest authority, the treatment for the eyes includes bloodletting, medicaments, the bath and wine; but he gave little explanation of the proper times and reasons for these remedies, things of the highest importance in the art of medicine."²⁴ Some analogies establish an undeniable connection between the treatments of epidemic *ophthalmia* and those for *lippitudo*: many examples bring to the fore what some would merely regard as approximations and what others would regard as marks of Celsus' original style. Philippe Mudry proved this point by comparing the *De Medicina* 2.1.6–9 and *Aph.* 3.20–30.²⁵ Still, the *De Medicina* reveals some interesting facts concerning the treatment or the regimen prescribed to the patient. Thus, like Hippocrates, Celsus recommends the use of suckers, he also advocates rectal injections, fomentations or cuttings;²⁶ most of all, he refuses the systematic use of bleeding.²⁷ Finally, Hippocrates advises astringent oilings, poultices or dry medicines,²⁸ but Celsus is the first one to make a list of the numerous medications invented since the fifth century BCE.²⁹

Consequently, the *De Medicina* builds on the contributions of Hellenistic nosology. The *Hippocratic Corpus* clearly associates the outbreak of *ophthalmia* with "swelling",³⁰ "flux"³¹ or "fluxion"³² and "rheum".³³

²¹ Cels. 1.9.5.

²² See Mudry (1977) 345–352; Mazzini (1992) 571–583.

²³ Hp., *Aph.* 6.31 (p. 186 Jones; 4.570 L.). This aphorism is also criticised by Galen: Gal., *In Hipp. Aph. comment.* 6.31 (18 A.45–50 K.); see also Smith (1979) 129 and *Aph.* 7.46 (p. 202 Jones; 4.590 L.).

²⁴ Cels. 6.6.1e: "According to Hippocrates, the oldest authority, the treatment of the eyes includes bloodletting, medicaments, the bath and wine; but he gave little explanation of the proper times and reasons for these remedies, things of the highest importance in the art of medicine".

²⁵ Mudry (1991) 257–269.

²⁶ Cels. 6.6.9.

²⁷ Cels. 6.6.1f–g.

²⁸ Hp., *Vid. Ac.* 9 (p. 171,14 Joly; 9.160 L.).

²⁹ Cels. 5.25.3 a; 6.6.1–39.

³⁰ Hp., *Epid.* VI 8 18 (p. 284,11 Smith; 5.350 L.): *oidemata*; see also Hp., *Gland.* 13.1 (p. 120,7 Potter; 8.568 L.): *oideousin*.

³¹ Hp., *Gland.* 13.1 (p. 120,6 Potter; 8.568 L.): *rhoos*.

³² Hp., *Vid. Ac.* 9 (p. 171,18,19,28 Joly; 9.160 L.): *rheuma/rheumatos*.

³³ Hp., *Epid.* I 2.5 (p. 154,12 Jones; 2.616 L.): *lêmia*.

As for Celsus, he reports "swelling",³⁴ "lacrimation"³⁵ and running of "rheum".³⁶ Yet, the Greek text mentions "lividities"³⁷ and "the state of urine",³⁸ whereas the Latin text mentions frontal itchings.³⁹ Besides, there is a greater number of complications from the disease in the *De Medicina* than in the Greek corpus: to the eye rupture⁴⁰ and the loss of vision⁴¹ are added "prolapse",⁴² "carbuncles,"⁴³ "pustules,"⁴⁴ "shrinking of one eye",⁴⁵ "trachoma"⁴⁶ and both eyes that "become dim".⁴⁷ Furthermore, according to the encyclopaedist, *lippitudo* is not fatal;⁴⁸ nor is it a symptom of cephalalgia,⁴⁹ a disease hence associated with *caligo*⁵⁰ ("blurred vision"). Finally, even if Hippocrates mentions "dry ophthalmias" (*ophthalmiai xera*),⁵¹ Celsus is the first one to use the compound word *xerophthalmia* in the texts we have at our disposal and to deal with that disease as a special case.⁵² As a consequence, Celsus' nosography is different from that of the *Hippocratic Corpus*: the encyclopaedist only quotes Hippocrates to distinguish himself from the Father of Medicine.

Two passages illustrate both the obvious kinship and the unbridgeable gap between Celsus' work and the Hippocratic texts: *De medicina* 6.6.1 a-d and *Prorrhetic II* 18.⁵³ Two excerpts from these passages are

³⁴ Cels. 6.6.1a; 6.6.1c; 6.6.1e: *tumor(e)*.

³⁵ Cels. 1.9.5; 6.6.1a-d; 6.6.1k: *lacrima(e)*.

³⁶ Cels. 6.6.1a-e; 6.6.1g-h; 6.6.1k-m; 6.6.5b; 6.6.8b-f; 6.6.14; 6.6.29; 7.7.15d: *pituita(m/e)*.

³⁷ Hp., *Epid. VI* 8.18 (p. 284,10 Smith; 5.350 L.): *peleiômata*; Hp., *Prorrh. II* 18 (p. 260,20 Potter; 9.46 L.): *pelidnai*.

³⁸ Hp., *Prorrh. II* 21 (p. 264, 18 Potter; 9.50 L.): *tên katastasin tou ourou*.

³⁹ Cels. 2.7.8: *Si fros prurit, lippitudinis metus est*.

⁴⁰ Hp., *Aer.* 4.3 (p. 78,5 Jones; p. 194,4 Jouanna; 2.20 L.): *Rhêgnusthai ta ommata*; Cels. 6.6.1d: *ruptum oculum*.

⁴¹ Hp., *Coac.* 219 (5.632 L.): *kindunos tuphlôthênai*; see Hp., *Morb. I* 3 (p. 104,3 Potter; 6,144 L.); Cels. 6.6.9: *scire oportet lumen esse amissum*.

⁴² Cels. 6.6.8g: *proptôsin*.

⁴³ Cels. 6.6.10: *carbunculi*.

⁴⁴ Cels. 6.6.11: *pustulae*.

⁴⁵ Cels. 6.6.14: *Euenit etiam, ut oculi uel ambo uel singuli minores fiant quam esse naturaliter debeant*.

⁴⁶ Cels. 6.6.27a: *aspritudinem*.

⁴⁷ Cels. 6.6.32: *caligare*.

⁴⁸ Hp., *Coac.* 219 (5.632 L.).

⁴⁹ Hp., *Coac.* 218 (5.632 L.).

⁵⁰ Cels. 4.2.2.

⁵¹ Hp., *Aph.* 3.12 (p. 124,11 Potter; 4.490 L.); *Aer.* 10.6 (p. 100,13 Jones; 100,19 Jones; p. 214,11; 215,1 Jouanna; 2.46 L.); *Aer.* 10.12 (p. 102,29 Jones; p. 217,8 Jouanna; 2.50 L.).

⁵² Cels. 6.6.29.

⁵³ See annex.

enough to emphasise similarities between the ideas: “But if both eyes are attacked simultaneously, the duration may possibly be shorter, but there is danger of ulceration”⁵⁴ can be regarded as the translation of the sentence “If both eyes suffer these things, they will be in more danger of ulcerating, and the crisis will be in a shorter time.”⁵⁵ Yet, in those very similar excerpts, one term attracts the attention of the historian of medicine: *lêmê* (“rheum”). A gloss from Cassius Felix (“the eye excretions or the pituitas Greeks are calling *lemai*”)⁵⁶ shows that the term *pituïta* is not the exact translation for the word *lême*. Besides, at the beginning of the excerpt from *Prorrhetic*, the expression *ophthalmoi de lêmôntes* (“Blair eyes”), becomes in the *De Medicina*, *Protinus autem orta lippitudine* (“Now directly ophthalmia sets in”). On the one hand, *lêmê* is a symptom of *ophthalmia*; on the other hand, the term *lippitudo* means both the disease and its symptom. This translation is of course an exception in the *De Medicina*,⁵⁷ but whether it results from diverging sources, an intentional correction by Celsus or an innovation due to the Hellenistic nosology, it announces the confusion surrounding the meaning of the term *lippitudo* in Latin literature,⁵⁸ as well as in modern translations. Vegetius, for example, describes eyes “from which *lippitudo* is running, looking like a bean”.⁵⁹ Consequently, the equivalence between *lêmê* and *lippitudo* mirrors an epistemological evolution: the formal variations between the Latin and the Greek texts reveal the existence of fundamental divergences.

The reading of passages connected to *lippitudo* and *ophthalmia* therefore shows that Celsus is not “a mere Roman epigone of the Greek masters whose originality lies all in Latin writing”⁶⁰ and that the *Hippocratic Corpus* represents for the *De medicina* what Aesop’s *Fables* are to Phaedrus’ or La Fontaine’s.

⁵⁴ Cels. 6.6.1b: *At si simul ea utrumque oculum inuaserunt, potest esse breuior, sed periculum ulcerum est.* (or. Spencer, p. 187).

⁵⁵ Hp., *Prorrh.* II 18 (p. 260,5 Potter; 9.44 L.).

⁵⁶ Cass.Fel. 29.5 (abbreviation used in the *Thesaurus Linguae Latinae*): *egestiones siue pituitas oculorum, quas Graeci lemas uocant* (my translation; text edited by Fraïsse [2002] pp. 59–60).

⁵⁷ See Cels. 7.7.15a and d.

⁵⁸ See in particular the translations for *lêmê* in the Christian *corpus*.

⁵⁹ Veg. *Mulom.* 2.120 (abbreviation used in the *Thesaurus Linguae Latinae*): *de quibus profluit lippitudo ad similitudinem fabae* (my translation; text edited by Lommatzsch [1903] p. 214).

⁶⁰ Mudry (1985) 150 (my translation): “un simple épigone Romain des maîtres Grecs, dépourvu de toute originalité autre que celle d’avoir écrit en latin.”

ANNEX

“Blear eyes [*ophthalmoi de lêmôntes*] heal best if the tears, rheum, and swelling all commence together. If the tears are mixed with the rheum [*lêmê*] and not excessively hot, if the rheum is white and soft, and if the swelling mild and lose, fine; for in this case the eye will grow together during the nights, and so painless, and thus the condition will be least dangerous and chronic. But if the tears flow down copious and hot, with very little rheum [*lêmê*] and not much swelling, should this be from but one of the eyes, the condition becomes very chronic, but is not dangerous; this variety is especially painless. Look for the first crisis towards the twentieth day; if it exceeds this term, expect it about the fortieth; but if the condition does not cease even in that number of days, it has crisis in sixty days. Throughout that whole time pay attention to the rheum [*lêmên*], to see whether it is mixed into the tears and becomes white and soft, especially during the critical times; for if the disease is going to end, the fluid will do these things. If both eyes suffer these things, they will be in more danger of ulcerating, and the crisis will be in a shorter time. Dry rheums [*lêmai de xêrai*] are painful, but reach their crisis quickly, unless the eye ulcerates. A great swelling, if painless and dry, is without danger, but if the swelling involves pain, it is bad for it to be dry, and there is a danger that the eye will ulcerate and grow together. It is also dangerous if the swelling is accompanied with tears and pain; for if the tears flow hit and salty there is a danger of ulceration of the pupil and eyelids. If the swelling subsides, but there is a copious flux of tears over a long period, and there are rheums [*lêmai*], predict in the case of men that there will be an eversion of the eyelids, and, in the cases of women and children, ulceration and an eversion of the eyelids. If the rheums [*lêmai*] are yellow-green or livid, the tears are copious and hit, there is fever heat in the head, pains move through the temple to settle in an eye, and these persons become sleepless, then an ulcer of the eye must occur, and there is a chance that such an eye will also rupture. It is advantageous either for fever to come on, or for the pain to settle in the eyebrow. You must predict what is going to happen to these persons, taking into consideration the duration, the fluxes from the eye, the severe pains, and the sleeplessness.”

HIPPOCRATES, *Prorrhetic II* 18 (Potter's translation; pp. 258–263 Potter; 9.44–46 L.).

“Now directly ophthalmia sets in [*Protinus autem orta lippitudine*], there are certain signs by which it is possible to foretell the course of the disease. For if lachrimation and swelling of the eyelids and a thick rheum [*crassa pituita*] appear all at once: if that rheum [*ea pituita*] is mixed with tears, if the tears are not hot, but the rheum is white and bland, and the swelling not hard, there is then no apprehension of a prolonged illness. But if lachrimation is profuse and hot, rheum scanty [*pituitae paulum*], swelling moderate, and that in one eye only, the case will be a prolonged one, but without danger. And that kind of ophthalmia [*Idque lippitudinis genus*] is the least painful, but is seldom relieved before the twentieth day, and at times lasts two months. As it subsides, the rheum [*pituita*] begins to be white and bland, mixed with tears. But if both eyes are attacked simultaneously, the duration may possibly be shorter, but there is a danger of ulceration. Now rheum [*pituita*], when it is dry and sticky, gives rise to some pain, but subsides sooner unless ulceration is set up. If there is great swelling without pain and dryness, there is no danger; if there is dryness, accompanied by pain, there is generally ulceration, and at times the result is that the eyelid sticks to the eyeball. There is danger of similar ulceration in the eyelids or in the pupils when, in addition to great pain, the tears are salt and hot; or if, even after the swelling has subsided, there continues for some time a flow of tears mixed with rheum [*pituita*]. The case is worse still when the rheum is pallid or livid, the tears hot and profuse, the head hot, and pain shoots from the temples to the eyes, causing wakefulness at night; in these circumstances generally the eyeball ruptures, and we must pray that there may be ulceration only. When the eyeball has ruptured inwards a touch of fever is beneficial. If the eyeball protrudes after rupturing outwards, there is no remedy. If something white has developed from the dark part of the eye, it persists for a long while; but if it is rough and thick, some vestige remains even after treatment.”

CELSUS, *De Medicina* 6.6.1a–d
(Spencer’s translation, pp. 185–186).

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ARETEO DI CAPPADOCIA LETTORE DI IPPOCRATE

Amneris Roselli

Summary

Aretaeus' debt to Hippocrates, evident in his adoption of the Ionic dialect and of a syntax closely imitative of that of the Hippocratic treatises, goes deeper still. In the wake of the work of K. Deichgräber, this paper analyses echoes of Hippocrates in the eight books On Acute and Chronic Diseases in an attempt to show the frequency of the quotations and their argumentative function. The study shows clearly that Aretaeus gives special weight to those treatises of the Hippocratic Corpus which had been the subject of commentaries, and that he assumes that his readers are sufficiently familiar with those treatises to be able to identify references not explicitly indicated in the text. These Hippocratic treatises supply Aretaeus with his starting point for a definition of ethics and medical etiquette.

Il proposito di affrontare il tema del Colloquio 'Hippocrates in Context' a partire da Areteo di Cappadocia, un personaggio che continua ad opporre una strenua resistenza a rivelare il suo proprio contesto, e cioè la sua collocazione cronologica¹ e geografica e la sua appartenenza dottrinale, può apparire bizzarro; tuttavia, volendo ricostruire la storia di *come* si è letto Ippocrate e *come* lo si è utilizzato negli anni che precedono Galeno, un periodo della tradizione ippocratica non ancora sufficientemente chiarito anche per la scarsità delle fonti, si è quasi obbligati ad affrontare lo studio di questo autore, che è noto per avere imitato Ippocrate, il fondatore riconosciuto della medicina; mi propongo con quest'indagine, che non è sistematica, di portare qualche elemento utile per ricostruire le modalità di lettura di Ippocrate nel primo secolo dell'età imperiale.

¹ In assenza di riferimenti certi e sulla base dell'adozione da parte di Areteo della dottrina pneumatica, si ritiene che Areteo sia vissuto nel I secolo dell'era cristiana, ma Nutton (1996) non esclude che egli possa essere un contemporaneo di Galeno.

Gli otto libri di Areteo *Sulle malattie acute e croniche* (quattro sulla loro diagnosi e quattro sulla terapia) documentano una presenza di Ippocrate ben più massiccia di quanto non farebbe credere l'unica menzione del suo nome in una sezione dedicata alla terminologia della paralisi.² Ippocrate è però il solo medico citato per nome da Areteo in tutti gli otto libri, così come sono conservati (manca, purtroppo, proprio la parte iniziale del primo libro che, come i libri terzo, quinto e settimo, doveva essere preceduta da un proemio). Come è noto, l'omaggio di Areteo ad Ippocrate si manifesta oltre che nella scelta del dialetto ionico, anche a livello stilistico-sintattico e nelle scelte lessicali.

La procedura che Areteo adotta nell'attingere ai testi ippocratici, già magistralmente descritta da Deichgräber (1971a), mi pare confrontabile con la pratica del reimpiego di frammenti architettonici di edifici precedenti, nelle costruzioni di età imperiale.³ Quella pratica non era dovuta alla penuria di materiale da costruzione ma alla volontà di valorizzare il nuovo edificio (nel nostro caso, il nuovo testo) inserendovi dei pezzi antichi; in letteratura quest'operazione può essere pienamente apprezzata solo da coloro che sono in grado di riconoscere anche poche parole incastonate nel testo, essa ha bisogno dunque di un pubblico decisamente colto.

Dopo gli studi di Deichgräber⁴ non è necessario spendere parole per convincere dell'alto tasso di letterarietà del testo di Areteo; tra le sue scoperte bisogna ricordare come egli abbia individuato l'interesse di Areteo per le 'glosse' ippocratiche, come dimostra il fatto che numerosi ippocratismi di Areteo corrispondono a glosse del *Lessico* di Erotiano;⁵

² La citazione (p. 44,14 Hude) pone un serio problema perché le parole ἀπόπληκτον . . . σκέλος τὸ κατ' ἕξιν, che Areteo gli attribuisce, non si trovano in nessuno dei trattati ippocratici conservati. Dopo Areteo, Oribasio (4.583 Daremberg-Ruelle = CMG VI 2 2 p. 234 Raeder) e Paolo Egineta 3.18 (da Filumeno ?) (CMG IX 1 p. 161 Heiberg) riportano la stessa notizia e, con qualche variante, lo stesso segmento testuale: ἀπόπληκτον αὐτῷ τὸ σκέλος (ἐγένετο); cfr. anche Ps.-Gal. *Introductio sive medicus* 13 (14.737). K. Deichgräber (1971a) 26 s., ha visto in queste parole di Areteo un riferimento a *Epid.* 6.1.5 (5.268,6 L. = 6 Manetti-Roselli): νάρκη μηροῦ τοῦ κατ' ἕξιν; si potrebbe invece avanzare l'ipotesi che Areteo e le due fonti successive, indipendenti da Areteo (e tra di loro?), citino qui il trattato ippocratico perduto *Sulle ferite mortali* (*De vulneribus exitiosis*) che è stato glossato da Erotiano e da Galeno e che viene citato ancora da autori bizantini, cfr. Anastassiou-Irmer (1997) e Roselli (2004).

³ Uso il paragone efficace che Serafina Cuomo ha trovato per descrivere la *Collectio mathematica* di Pappo di Alessandria, cfr. Cuomo (1998) 1 s.

⁴ Oltre a Deichgräber (1971a) si vedano anche Deichgräber (1972) e Deichgräber (1973).

⁵ Cfr. Deichgräber (1971a) 28 n. 2.

procedendo sulla strada che Deichgräber ha aperto cercherò di rispondere ad alcune domande: *quali* testi del *Corpus Hippocraticum* (CH) offrono ad Areteo materiale per il reimpiego,⁶ e *come* i materiali antichi vengono inseriti nel contesto nuovo? *Che cosa* si presume che i lettori di Areteo potessero riconoscere come appartenente ad Ippocrate? E infine, ad Areteo si deve attribuire solo un ippocratismo stilistico apprezzabile in una dimensione strettamente letteraria o si possono trovare tracce più profonde dell'insegnamento ippocratico, per esempio nell'adozione dello stile e dell'etichetta della pratica medica? Mi pare, infatti, che il modello ippocratico abbia agito anche sul modo di costruire la figura del medico e di definire i suoi comportamenti e che esso abbia fornito ad Areteo una guida per realizzare i suoi numerosi interventi autoriali.⁷

Mi propongo qui di passare in rassegna tipi di reimpiego diversi, aggiungendo qualche nuova identificazione a quelle già note, ma soprattutto cercando di definire quali testi Areteo cita e perché.

MEMORIA DI SEGMENTI TESTUALI IPPOCRATICI

Esamino in questo paragrafo due tra i molti casi di ripresa di segmenti testuali ippocratici avulsi dal loro contesto; in questi casi la memoria di espressioni ippocratiche è funzionale a impreziosire il testo di Areteo.

⁶ L'apparato dei *similia* redatto da Hude (1923) segnala le somiglianze di contenuto tra Areteo e i trattati nosologici del CH, ma omette le numerose riprese testuali e le ancora più numerose allusioni; questo apparato è stato opportunamente integrato con gli *Additamenta* della seconda edizione (1958) 173-174. Altre riprese dei testi del CH sono state successivamente segnalate nelle monografie di Kudlien (1963) e di Deichgräber (1971a), Deichgräber (1972) e Deichgräber (1973). A questi contributi della filologia moderna vanno aggiunti i preziosi contributi esegetici del medico francese del XVII sec. Pierre Petit. Questi lavori offrono una lista consistente, ma ancora non esauriente, dei passi del CH a cui Areteo allude o che direttamente richiama; solo un sistematico lavoro di commento, tuttavia, come già osservava Deichgräber (1971a) 39, potrà permettere di scoprire allusioni e rielaborazioni che restano ancora nascoste nel testo.

⁷ Assumo una posizione in parte diversa da quella di Oberhelman (1994) 966 che conclude il suo saggio con le parole: "what is Hippocratic in Aretaios, in the final analysis, is not the medical theories and praxis, but *only* (corsivo mio) the style".

ὥς δέχεται μὲν τὸν ἥερα (Aret. 6.3.15, p. 129,22 Hude)

A p. 129,22, nel capitolo sulla terapia dei cardiaci, Areteo raccomanda di coprire il malato con una coperta (*epiblēma*) leggera, che abbia la doppia funzione di far passare l'aria dall'esterno e permetta la traspirazione del calore in eccesso del torace. Il passo richiama *Epid.* 6.4.8⁸ dove troviamo l'identica struttura sintattica e una parola, *epithēma*, che potrebbe aver favorito l'evocazione del testo ippocratico. Il senso di *Epid.* 6.4.8 è oscuro, e già lo era per i commentatori antichi,⁹ ma tutti sembrano ritenere che queste parole riguardino la predisposizione di una terapia:

Aret. 6.3.15, p. 129,22/Hude:

ἀτὰρ καὶ ἐπίβλημα ἔστω

κοῦφον, παλαιόν, ὥς δέχεται μὲν
τὸν ἥερα, διαπνέη δὲ τοῦ θώρηκος
τὴν θέρμην.

Hipp. *Epid.* 6.4.8 (5.308,17 L. =
p. 90 Manetti-Roselli):

Ὑδωρ ἀφεψηθὲν, τὸ μὲν ὥς
δέχεται τὸν ἥερα· τὸ δὲ μὴ
ἔμπλεον εἶναι καὶ ἐπίθημα ἔχειν.

Per dimostrare che la ripresa di *Epid.* 6 da parte di Areteo è reale (e che la somiglianza non è casuale), occorre verificare l'uso del nesso δέχεσθαι τὸν ἥερα nel resto del *CH* e in Areteo. I risultati sono questi: esiste solo un'altra coppia di occorrenze di questo nesso (una in *Male sacro* [*De morbo sacro*] e una in Areteo), tutte e due relative al passaggio di aria attraverso vasi semioclusi: passa l'aria ma non passa il flegma (*Morb. sacr.*) o il pus (Aret.): pur se con minore evidenza, anche qui, di nuovo, è in azione la 'memoria' ippocratica:

Aret. 3.10.2, p. 51,23 Hude:

εἰ μὴ κοτέ τις ἀποπνιγῇ ἀθρόῃ
ἐλκύσει τοῦ ὑγροῦ, τῆς ἀρτηρίας
οὐ δεχομένης τὸν ἥερα πλήθει τοῦ
πύου.

Hipp. *Morb. sacr.* 8 (6.376,9

L. = p. 74,27 Grensemann):

αἱ φλέβες . . . κακοῦνται καὶ
μέρος τι συνισχναίνονται, ὥστε
τὸν μὲν ἥερα δέχεσθαι, τοῦ δὲ
φλέγματος τὸν κατάρροον μηκέτι
ὁμοίως ἐπικαταρρεῖν.

Il nesso δέχεσθαι τὸν ἥερα è attestato anche da altri autori; tra i più antichi lo usa Aristotele nelle opere biologiche che trattano della res-

⁸ Così osservava già Deichgräber in un nota manoscritta sul suo esemplare dell'edizione Hude ora in mio possesso.

⁹ Il commento di Galeno, in parte conservato solo nella versione araba, occupa una decina di pagine (cfr. 17B.153–166 K. = CMG V 10 2 2 p. 207–218 Wenkebach).

pirazione, o meglio dell'aerazione delle parti, ma in quel caso la sintassi logica e grammaticale è decisamente diversa.

ἐθρεύμην καὶ ἐθώμαζον (*Aret. 1.6.5, p. 6,20 Hude*)

Elencando i sintomi del tetano, Areteo segnala il caso di un paziente in cui egli aveva osservato spasmi degli orecchi e commenta: “ed io lo osservavo e mi stupivo” (*ἐγὼ δὲ ἐθρεύμην καὶ ἐθώμαζον*). Già Petit (1726) 392, ha individuato qui la ripresa delle parole ippocratiche relative al caso, narrato in *De natura pueri* (cap. 13), della cantante (*mousoergos*)¹⁰ che, non volendo continuare una gravidanza, su consiglio del medico, saltando, riuscì ad espellere il seme; l'episodio si conclude con le parole: “ed ella lo vide, lo osservò e si stupì” (*κάκεινη ἰδοῦσα ἐθεήτο καὶ ἐθαύμασεν*). Si noti che in *De natura pueri* lo stupore non è del medico, che si attende quel risultato, e che anzi, con soddisfazione, segnala che la donna si stupì; qui invece lo stupore è di Areteo che commenta l'apparizione di un sintomo eccezionale. L'episodio di *De natura pueri* doveva essere molto noto: è menzionato da Sorano, *Gynaecia* 1.60 = 59 Burguière—Gourevitch—Malinas, e poi da Galeno, *De semine* 1.4 (4.525,7 K. = CMG V 3 1 76,6 De Lacy); *De foetuum formatione* 1 (4.654,3 ss. K.).¹¹ Alessandro Lami mi segnala anche un possibile confronto con *Od.* 8.265 *μαρμαρυγὰς θεῆτο ποδῶν, θαύμαζε δὲ θυμῷ*; gli omerismi in Areteo sono assai frequenti come ha osservato Deichgräber (1971a), ma non è escluso che già l'autore ippocratico si fosse ricordato di Omero.

La terapia dei frenitici: Aret. 5.1 (pp. 91,12–98,6 Hude)

In questo paragrafo segnalo i riferimenti ippocratici che ho identificato in un intero capitolo di Areteo (5.1 sulla terapia della frenite) per dare un'idea della loro frequenza e della loro funzione.

Il capitolo si apre con le indicazioni relative all'ambiente in cui deve essere curato il malato e al comportamento di chi sta vicino a lui; si raccomandano tranquillità e silenzio. Areteo motiva la prescrizione

¹⁰ Cfr. Lonie (1981) 164.

¹¹ Nella più tarda citazione di quest'episodio in Ps. Iambl., *Theologoumena arithmeticae* p. 61,14 ss. De Falco, le parole che interessano (*κάκεινη ἰδοῦσα ἐθεήτο καὶ ἐθαύμασεν*) sono omesse. Per la fortuna di questo passo nella letteratura greca e latina cfr. De Lacy (1992), 211 s.

del silenzio con la particolare sensibilità dei frenitici e citando un segmento del *Prorretico* (*Prorrh.*) 1.16¹² ~ *Prognosi di Cos* (*Coac.*) 95 introdotto da γάρ; è evidente che Areteo ritiene la citazione riconoscibile da parte dei suoi lettori:

Aret. 5.1, p. 91,16 Hude: ὀξυήκοι γάρ ἡδὲ ψόφου καθαπτόμενοι φρενιτικοί. <i>ibid.</i>, p. 97,18 Hude: διδόναι ὦν ὁκόσον ἐς στομάχου ἄκος· ὀλίγον δὲ ἀρκέει· βραχυπύται γάρ οἱ φρενιτικοί.	<i>Prorrh.</i> 1.16 (5.514,9 L.) ~ <i>Coac.</i> 95 (5.602,21 L.): οἱ φρενιτικοὶ βραχυπύται, ψόφου καθαπτόμενοι τρομώδεες ἢ σπασμώδεες.
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Il nesso ψόφου καθαπτόμενοι, è esclusivamente ippocratico e non compare altrove.¹³ Più avanti in questo stesso capitolo Areteo riprende anche l'aggettivo βραχυπύται di *Prorrh.* 1.16,¹⁴ per giustificare la prescrizione di piccole quantità di bevande e, di nuovo, segnalando la citazione con γάρ.

Le prescrizioni relative al comportamento dei presenti continuano a p. 92,1 Hude: εἴσοδοι τῶν φιλτάτων, μῦθοι καὶ λαλιὴ μὴ θυμοδακεῖς. Non è difficile vedere qui la ripresa di εἴσοδοι, λόγοι di *Epid.* 6.4.7 (5.308,15 L. = 88 Manetti-Roselli) che viene riempito con i determinanti: “visite delle persone più care, conversazioni che non mordono l'animo” (il nesso θυμοδακῆς μῦθος è omerico, *Od.* 8.185, e impreziosisce l'ippocratico λόγοι). In questo caso il modello detta la sequenza delle due prescrizioni (le visite, la conversazione); Areteo tuttavia dà un'interpretazione diversa delle parole εἴσοδοι, λόγοι rispetto a quella che accoglie Galeno; esse, stando a Galeno (*Comm. in Hipp. Epid.* 6.4.9 (17B.144,1 ss. K. = CMG V 10 2 2 p. 203,1–205,10 e 206,1–11 Wenkebach) sarebbero riferite al medico (προφανῶς ἐπὶ τὸν ἰατρὸν ἀναφέρεται), in Areteo invece individuano il comportamento dell'entourage del malato.

¹² La ripresa del *Prorretico* è stata segnalata già da Petit (1726) 568.

¹³ Le altre occorrenze sono esclusivamente citazioni del *Prorretico*, e sono tutte in Galeno; cfr. *Diff. resp.* 3.10 (7.941,5 K.); *Comm. In Hipp. Prorrh.* 1.1.16 (16.551 K. = CMG V 9 2 p. 33,13 ss. Mewaldt) e *Gloss.* (19.156,7 K.).

¹⁴ Confronto segnalato già da Petit (1726) 578. Areteo porta un elemento a difesa del testo dei mss. contro la variante βραχυπύπται citata da Galeno nel commento (1.16, 16.551,13 K. = CMG V 9 2, p. 33,23 Mewaldt). L'agg. βραχυπότης compare solo in *CH*, in Areteo (2 volte) e in Galeno, per lo più in contesti esegetici del *Prorretico*; in *Comm. in Hipp. Epid. III*, 3.74 (17A.755 K.), Galeno spiega che l'aggettivo significa ‘che beve poco e raramente’.

Ancora. La prescrizione di far dormire i frenitici su di un letto con coltri morbide (p. 91,23 Hude), che si precisa poi con la scelta di un luogo in ombra o di un luogo soleggiato, secondo il tipo di frenite (p. 92,2 Hude), riprende una prescrizione di *Regime delle malattie acute* (*De victu acutorum*):

Aret. 5.1, p. 91,23 Hude: ἐν ψιλοῖσι τοῖσι στρώμασιν . . . ἀτὰρ ἡδὲ μαλθακοῖσι; <i>ibid.</i>, p. 92,2 Hude: κατάκλινις ἢ ἐν ζόφῳ ἢ ἐν φωτὶ πρὸς τὸ νόσημα τεκμαρτέον.	<i>Acut. (Sp.)</i> 18,2 (2.434,2 L. = 77,10 Joly): κατακλίνειν ἐς ζοφερά οἰκήματα καὶ κατακεκλίσθαι ὡς ἐπὶ μαλθακωτάτοις στρώμασιν.
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E infine in questo capitolo si riscontrano, a breve distanza e adattate al contesto specifico, tre riprese degli *Aforismi* (*Aphorismi*),¹⁵ *Aph.* 1.20, 1.16 e 1.19 due dei quali (*Aph.* 1.19 e 20) derivano a loro volta da *Hum.* 6 (5.484,11 L. = 4.72 Jones):

Aret. 5.1, p. 92,19–21 Hude: πολλὸν πρὸ τῶν κρισίων ἐν τοῖσι ὀξέσι κενοῦν χρὴ [ἦ] φαρμακεῖσιν* ἢ τοῖσι ἄλλοις ἐρεθισμοῖσι χρέεσθαι.	Hipp. <i>Aph.</i> 1.20 (4.468,8 L. = 4.106 Jones): Τὰ κρινόμενα καὶ τὰ κεκριμένα ἀρτίως, μὴ κινέειν, μὴδὲ νεωτεροποιεῖν, μήτε φαρμακεῖσι, μήτ' ἄλλοις ἐρεθισμοῖσιν, ἀλλ' ἑὸν.
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* [ἦ] φαρμακεῖσιν Deichgräber
 (1972) 57: ἢ φαρμακεύειν
 Hude

<i>ibid.</i>, p. 93,6 Hude: τροφὴ ὑγρὴ πᾶσι μὲν τοῖσι πυρεταίνουσι, οὐχ ἥκιστα δὲ φρενιτικοῖσι.	Hipp. <i>Aph.</i> 1.16 (4.466,17 L. = 4.106 Jones): Αἱ ὑγραὶ δίαίται πᾶσι τοῖσι πυρεταίνουσι ξυμφέρουσι, μάλιστα δὲ παιδίοις, καὶ τοῖσιν ἄλλοις τοῖσιν οὕτως εἰθισμένοις διαιτᾶσθαι.
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<i>ibid.</i>, p. 93,17–19 Hude: ὑποστέλλεσθαι δὲ ἐν τῇσι κρίσεσι καὶ μικρόν τι πρὸ τῶν κρισίων· ἦν δὲ ἐς μῆκος ἢ νοῦσος ἤ, μὴ ἀφαίρειν τῶν προσθεσίων.	Hipp. <i>Aph.</i> 1.19 (4.468,5 L. = 4.106 Jones) Τοῖσιν ἐν τῇσι περιόδοις παροξυνομένοις μὴδὲν διδόναι, μὴδ' ἀναγκάζειν, ἀλλ' ἀφαίρειν τῶν προσθεσίων πρὸ τῶν κρισίων.
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¹⁵ Già segnalate nell'*Additamentum* (1958).

A p. 93,6 Hude Areteo modifica, adattandolo al caso dei frenitici, un aforismo che, dopo l'indicazione generale "a tutti i febbricitanti giovano diete liquide", individua specialmente il caso dei bambini e di coloro che sono abituati a quel tipo di dieta. Negli altri due casi, due aforismi ippocratici che vietano interventi terapeutici in presenza o in prossimità delle crisi forniscono ad Areteo dei semplici segmenti testuali: (πρὸ τῶν κρισίων (92,19 e 93,18 Hude), φαρμακεῖσιν ἢ τοῖσι ἄλλοισι ἐρεθισμοῖσι χρέεσθαι (92,20–21 Hude), ἀφαιρέειν τῶν προσθεσίων (93,19 Hude).

Dunque per la redazione di questo capitolo 5.1, sulla terapia dei frenitici, gli scritti del *CH* forniscono sia elementi dottrinali (i frenitici sono disturbati dai rumori, devono essere fatti riposare in luoghi adatti) sia puri segmenti linguistici non legati al contesto specifico; significativamente tutti i trattati da cui provengono i materiali impiegati da Areteo (*Epidemie VI*, *Proreptico*, *Aforismi (o Umori)* e *Regime delle malattie acute*), sono trattati che erano fatti oggetto di commento.

LA PRESENZA DI SINGOLI TRATTATI IPPOCRATICI IN ARETEO

Cercherò ora di verificare la presenza di materiali ippocratici procedendo per singoli trattati (e senza pretese di completezza); ho scelto di menzionare i trattati da cui Areteo ha citato più spesso; come si vedrà anche questi sono *tutti* trattati di cui sappiamo che erano oggetto di commento.

Umori

Poco si può aggiungere, se non qualche precisazione, alle parole di Deichgräber (1972) a proposito della presenza di *Umori* (*De humoribus*) in Areteo.¹⁶

a) In 3.7 (sulla paralisi), Areteo trasferisce da *Hum.* 2 (5.478,8 L. = 4.66 Jones) tre elementi tratti da un'enumerazione di fenomeni fisici

¹⁶ Cfr. Deichgräber (1972) 55–58. Alcune delle identificazioni che egli propone sono incerte; p. es. nel già citato capitolo sulla terapia dei frenitici è impossibile stabilire se la ripresa è da *Hum.* 6 o da *Aph.* 1.19 e 20; inoltre mi pare poco probabile che a 5.1.13, p. 94,7 Hude ὕπνον καὶ ἡρεμίην μηχανέεσθαι Areteo riprenda *Hum.* 5 (5.484,2 L. = 4.72 Jones) ὕπνων . . . μηχανᾶσθαι; il nesso ὕπνον μηχανᾶσθαι non è esclusivamente ippocratico e la sintassi nei due testi è diversa.

riferiti al malato e con apparente valenza terapeutica (παίδευσις ἐμέτου . . . οὔρου, πταρμού, δακρύων, κνησμῶν, τιλμῶν, ψαυσίων,¹⁷ δίψης, λιμοῦ κτλ.) e li inserisce in un elenco di fattori e azioni (compiute da altri) alle quali non è sensibile chi è affetto da paralisi, cfr. p. 46,18 Hude: ἀναισθησίῃ θερμοῦ τε καὶ ψυχροῦ, ἀτὰρ καὶ τιλμῶν καὶ κνησμῶν καὶ ψαυσίων. In questo modo Areteo mostra di essere interessato alla sequenza dei termini e non alla loro funzione nel testo di partenza.

b) La rielaborazione di *Hum.* 3 (5.480,4 L. = 4.68 Jones) θάλψις, ψῦξις ἔσωθεν ἔξωθεν che si legge in Areteo, p. 84,3 Hude, nella forma ἐγγυτάτω τοῦ ἔξω ψύχευς, ἀποτάτω δὲ τοῦ εἴσω θάλπεος fornisce invece un'interpretazione delle parole ippocratiche alle quali Areteo dà una struttura sintattica e logica più articolata rispetto a quella originale e una valenza nel campo della fisiologia: esse significherebbero che la fonte del calore si trova all'interno del corpo mentre l'ambiente esterno è causa del raffreddamento.

c) Maggiore interesse riveste la citazione di *Hum.* 1 (5.476,5 L. = 4.62 Jones) εὐλάβεια, ἀπειρίη, δυσπειρίη, già segnalata da Deichgräber (1972) e recentemente discussa da Demont (1999) 187 ss.¹⁸ A p. 102,3 Hude Areteo interpreta *Umore* e fa suo il principio metodologico che raccomanda di sperimentare terapie nuove: ἀγαθὴ δὲ διδάσκαλος ἡ πείρῃ· χρὴ δὲ καὶ αὐτὸν πειρῆν· εὐλαβεῖη γὰρ ἀπειρίη. Come già si è osservato nel capitolo sulla frenite,¹⁹ il γάρ segnala la citazione.

d) E infine, nel capitolo sulla terapia dello sputo di sangue (6.2), Areteo riprende un *exemplum* ippocratico da *Umore* 11: cfr. p. 122,30 Hude ἐπὶ μὲν τῆς ἀραιώσιος τῶν φλεβῶν ἡ στῦψις ἀρκέει· διαρρεῖ γὰρ ὡς ὕδρεϊον νέον δευθὲν τῇσι ἀραιώσεσι e *Hum.* 11 (5.492,4 L. = 4.82 Jones) ὥσπερ ὕδρῆϊον νέον διαπηδᾷ,²⁰ παλαιούμενον στέγει, οὕτω καὶ ἡ γαστήρ διείη τὴν τροφήν, καὶ ὑποστάθμην ἴσχει ὥσπερ ἀγγεῖον. Nel capitolo sulla diagnosi e i sintomi dello sputo di sangue (2.2) Areteo aveva individuato tre diversi tipi di questo male, due più gravi, dovuti a rottura e consunzione dei vasi, ed uno, meno grave, dovuto all'allentamento dello loro tuniche che permette alla parte più acquosa

¹⁷ Areteo conferma la lezione di M contro ψαύσιος di A.

¹⁸ Demont (1999) ha dimostrato che questa citazione di Areteo può essere usata per la costituzione del testo di *Umore*.

¹⁹ E come osserva anche Demont (1999) 187 s.

²⁰ È possibile, come si suggerisce (I. Garofalo) nel *Vocabolario della lingua greca* a cura di F. Montanari s.v. διαπηδάω, che si debba restituire la forma διαπιδύει (ricostruita sulla lezione del ms. A διὰπεῖ· εἰ δὲ. Cf. Hesych. δ1222 διαπιδύει . . . διαπηδᾷ). L'uno e l'altro verbo sono sinonimi di διαρρεῖ (il verbo che usa Areteo).

del sangue di trasudare attraverso di essi. Qui (in 6.2) sono prescritte tre diverse procedure terapeutiche: 1) legare i vasi attraverso cui scorre il sangue nel caso di rottura, 2) disseccare i vasi stessi impedendo che in essi scorra il sangue (ξηραίνειν τὰς ἐφόδους πρὸς ἔδρην τὴν ἀρχαίην τὸ αἷμα στήσαντα) nel caso che essi siano consunti (si noti un'altra ripresa interpretativa di *Hum.* 1 [5.478,2 L. = 4.64 Jones]: ἀλλὰ τὰς ἀφόδους²¹ ξηραίνειν), o 3) produrre l'ispessimento del sangue nel caso del loro allentamento. In quest'ultimo caso la στῦψις è sufficiente, infatti le vene sono "come un orcio nuovo" che lascia trasudare acqua attraverso le sue porosità. Areteo (o la tradizione medica da cui egli dipende) potrebbe aver fatto ricorso a questo *exemplum* indipendentemente da *Umore*, tanto più che in *Umore* esso spiega un fenomeno fisiologico (il modo in cui la parte più sottile del nutrimento filtra dal ventre al resto del corpo e si forma un residuo) mentre qui ne spiega uno patologico. E tuttavia, in considerazione del fatto che nei testi antichi l'esemplificazione è fortemente tradizionale, mi pare che il riferimento ad *Umore* si debba ritenere quasi certo.

Nutrimento

Lo scritto sul *Nutrimento* (*De alimento*), caratterizzato dallo stile aforistico ed ellittico, di stampo eracliteo, fornisce ad Areteo alcune formulazioni icastiche:²²

a) A p. 8,20 Hude (1.7 sulla *synanchê*), Areteo attribuisce la malattia a una causa esterna come una cattiva mutazione (*tropê*) dell'aria che diviene troppo calda e troppo secca; Areteo difende questa dottrina ricordando che numerose altre malattie hanno la stessa forma delle cause esterne che le determinano; aggiunge poi una serie di prove di ciò e, prima tra tutte, l'identica capacità di nuocere che hanno i succhi (dei cibi) e gli umori (del corpo): χυλοὶ φθείροντες ἔσωθεν καὶ ἔξωθεν. Si tratta della ripresa delle parole iniziali di *Alim.*

²¹ Sulla base del confronto con Areteo, Deichgräber (1972) 57 s. propone di correggere in ἐφόδους; ma forse questo intervento non è necessario; vedi anche Demont (1999) 199 s.

²² Identificate nell'*Additamentum* (1958), e da Kudlien (1963) 37. Per la discussione si veda anche Deichgräber (1973).

14 (9.102,12 L. = p. 141,20 Joly) *χυλοί*²³ *φθείροντες καὶ ὅλον καὶ μέρος καὶ ἔξωθεν καὶ ἔνδοθεν*, che Areteo ripropone conservando la forma nominale del participio; la citazione di *Alim.* 14, introdotta in asindeto, può essere facilmente identificata dai lettori ed ha un evidente valore di conferma dell'assunto.

b) A p. 27,6 e 136,10 Hude, nel capitolo sulle malattie acute del fegato e in quello sulla loro terapia, è citato *Alim.* 31 (9.110,1 L. = p. 144,15 Joly).²⁴ Le sole parole iniziali dell'aforismo (*ρίζωσις γὰρ φλεβῶν ἦπαρ*), con la solita inserzione di *γάρ*, spiegano in 2.7.1 la straordinaria gravità dell'emorragia del fegato “*perché* nel fegato vi è la radice delle vene”. Nel capitolo terapeutico (6.7, 1–2) invece tutto *Alim.* 31 (*ρίζωσις φλεβῶν ἦπαρ, ρίζωσις ἀρτηριῶν καρδίη· ἐκ τούτων ἀποπλανᾶται ἐς πάντα αἷμα καὶ πνεῦμα, καὶ θερμασίη διὰ τούτων φοιτᾷ*) è parafrasato e in parte reinterpreted²⁵ per spiegare la gravità della *phlegmone* della vena dorsale e dell'arteria spessa; la parafrasi di *De alimento* ha valore probatorio ed è, al solito, introdotta da *γάρ*, cfr. p. 136,10–13 Hude: *τῆς μὲν γὰρ φλεβὸς ρίζωσις ἦπαρ, τῆς δ' ἀρτηρίης ἀρχὴ κραδίη. . . . θέρμην μὲν γὰρ ἡ κραδίη ἐνδιδοί τῇ ἀρτηρίῃ, τῇ φλεβί δὲ τὸ ἦπαρ αἷμα*.

A queste parole Areteo fa immediatamente seguire (136,13–14 Hude) una massima (*ἀμφοῖν δὲ μεγάλων μεγάλα τὰ ἔγγονα*²⁶ [*αἱ φλεγμοναί*])²⁷ che mette in stretta relazione di dipendenza l'importanza dei due organi (fegato e cuore) e l'importanza delle loro affezioni; Areteo rielabora qui *Epid.* 6.4.19 (5.312,6 L. = 96 Manetti-Roselli) *δύο δὲ μεγάλων, μεγάλα καὶ τὰ ἔγγονα γίνεται*. Questa è, molto probabilmente, un'espressione proverbiale, ma non se ne conoscono altre attestazioni al di fuori dei nostri due autori; Areteo la riprende, variandola, anche a 4.1.5 (p. 63,8 Hude), a proposito di vari tipi di idropisia: *δυοῖν μεγάλων μέζον κακὸν τὸ ἔκγονον*. Qui le due riprese ippocratiche in sequenza

²³ Areteo conferma la lezione di M *χυλοί*, accolta anche da Littré, contro *χυμοί* di A, accolta da Joly.

²⁴ Citato più volte da Galeno in *De placitis*.

²⁵ Si noti che nella parafrasi di Areteo non c'è menzione del pneuma e che il calore, che *De alimento* attribuisce a sangue e pneuma, sembra trovare in Areteo la sua fonte esclusivamente nel cuore.

²⁶ Accolgo la lezione *ἔγγονα*, osservando che a 4.1.4 p. 63,8 Hude (*δυοῖν μεγάλων μέζον κακὸν τὸ ἔκγονον*) e in *Epid.* 6.4.19 si legge invece la forma *ἔκγον-* (lo scambio è frequente nei papiri), cfr. anche *Index Hippocraticus s.v.* Nel lemma dei commenti ad *Epid.* 6 si osserva la stessa oscillazione tra *ἔγγονα* di Galeno, secondo il ms. marciano, e *ἔκγονα* del lemma di Palladio.

²⁷ Propongo l'espunzione di *αἱ φλεγμοναί*, un'evidente glossa; Wigan, per dare un verbo ad *αἱ φλεγμοναί*, aveva proposto di leggere *μεγάλοι τ' ἐγγίγνονται αἱ φλεγμοναί*.

danno maggiore forza al discorso: si tratta di un procedimento che troveremo ancora.

c) A 5.10.4 (p. 114,20–21 Hude), nel capitolo sulla terapia della pleurite, Areteo introduce la sezione sulla terapia attraverso la dieta (ἐν τροφῇ γὰρ κείσεται τὰ φάρμακα, ἀτὰρ καὶ τὰ φάρμακα ἐν τροφῇ) con una allusione a *Alim.* 19 (9.104,11 L. = p. 142,15 Joly): Ἐν τροφῇ φαρμακεῖ ἄριστον, ἐν τροφῇ φαρμακεῖ φλαῦρον, φλαῦρον καὶ ἄριστον πρὸς τι. Nonostante la somiglianza formale, l'aforisma di *Alim.* risulta fortemente modificato: in Areteo la ripetizione di ἐν τροφῇ si accompagna infatti ad una inversione tra soggetto e predicato che non sono nella fonte.

d) E infine, segnalata da Kudlien,²⁸ un'eco di *Alim.* 23 (9.106,6 L. = p. 143,1 Joly), che sarà molto spesso citato da Galeno: σύρροια μία, σύμπνοια μία, συμπαθέα πάντα, si trova a p. 12,15 Hude: χρή δὲ ταῦτα πάντα ἀλλήλοισι ξυνφθὰ καὶ ξύμπνοα ἔμμεναι, ἀπὸ μῆς αἰτίης ξύμπαντα.

Prognostico

Areteo evoca in tre luoghi diversi e in contesti particolarmente enfatici segmenti testuali del primo capitolo del *Prognostico*; di questo testo Areteo fa sua la concezione del rapporto medico-paziente-malattia, cogliendo in particolare il motivo della necessità di intervenire rapidamente e la consapevolezza di non potere guarire tutti i malati.

1) Il capitolo sulla terapia della malattia cardiaca 6.3.1 (p. 126,3 Hude), una malattia pericolosa e che comporta molti rischi, si apre con la ripresa dell'incipit del *Prognostico*; l'ippocratico δοκεῖ μοι ἄριστον εἶναι viene sostituito da un ingiuntivo, μάλα χρή:

Aret. 6.3.1 p. 126,3 Hude: Ἐν συγκοπῇ μάλα χρή τὸν ἱητρὸν πρόνοιαν ἐπιτηδεύειν· μέλλουσιν μὲν γὰρ ἢν προγινώσκῃς τὰ τε παρεόντα ἐπεσσυμένως συνεργὰ ἴένσεο· ἀτὰρ ἡδὲ ἐξελάοις ἂν αὐτήν πρὶν ἥκειν.

Hipp. *Progn.* 1 (2.110,1 L. = 93,1 Alexanderson): Τὸν ἱητρὸν δοκεῖ μοι ἄριστον εἶναι πρόνοιαν ἐπιτηδεύειν. προγινώσκων γὰρ καὶ προλέγων παρὰ τοῖσι νοσέουσιν τὰ τε παρεόντα καὶ τὰ προγεγονότα καὶ τὰ μέλλοντα ἔσεσθαι . . . τὴν δὲ θεραπείην ἄριστα ἂν ποιεῖτο προειδῶς τὰ ἐσόμενα ἐκ τῶν παρεόντων παθημάτων.

²⁸ Kudlien (1963) 37.

Nonostante una corruttela ancora non sanata (†ένσσο), è evidente che la ripresa di *Prognostico* va al di là della sola prima frase e che Areteo sviluppa il tema ippocratico della prognosi come strumento per vincere il male prima che esso si sviluppi: questo, del resto, è un tema ricorrente in Areteo, come si vede anche nel caso che segue.

2) Nel già citato capitolo sulle cause e i sintomi della *synanchê*, Areteo utilizza un altro segmento di *Progn.* 1 per segnalare la gravità del male e il poco spazio che resta al medico per intervenire:

Aret. 1.7.6 (p. 9,13 Hude):
οἱ δὲ ὀξύτατοι θνήσκουσι
αὐτῆμαρ, ἔσθ' ὅπῃ καὶ
πρὶν καλέσασθαι τὸν ἱατρὸν,
οἱ δὲ καὶ ἐσκαλεσάμενοι
οὐδὲν ὄναντο· ἀπέθανον γὰρ
πρὶν ἢ τὸν ἱατρὸν ἔτι <τῇ>[#]
τέχνῃ χρῆσασθαι.

ἔτι <τῇ> Reiske et Hude: ἐπὶ
codd., fortasse τῇ
scribendum

Hipp. *Progn.* 1 (2.110.10 L. =
193,9 Alexanderson): ἐπειδὴ δὲ
οἱ ἄνθρωποι ἀποθνήσκουσιν, οἱ
μὲν πρὶν ἢ καλέσαι τὸν ἱατρὸν,
ὑπὸ τῆς ἰσχύος τῆς νούσου, οἱ
δὲ καὶ ἐσκαλεσάμενοι
παραχρῆμα ἐτελεύτησαν, οἱ μὲν
ἡμέρην μίην ζήσαντες, οἱ δὲ
ὀλίγῳ πλέονα χρόνον, πρὶν ἢ τὸν
ἱατρὸν τῇ τέχνῃ πρὸς ἕκαστον
νούσημα ἀνταγωνίσασθαι.

Il motivo della rapidità dell'intervento è ricorrente nei libri terapeutici di Areteo. A 6.2.2 (p. 120,31 Hude), nel capitolo sulla terapia dello sputo di sangue, Areteo, coerentemente con la visione agonistica del rapporto medico-malattia, raccomanda che il medico sia più incalzante nel portare soccorso (*aregeîn*) di quanto non sia la malattia nel nuocere (χρῆ ὧν τὸν ἱατρὸν τοῦ πάθεος ξυνεπείγειν μᾶλλον ἀρήγοντα)²⁹ e così a

²⁹ Questo è il solo caso in cui Areteo riferisce anche al medico il verbo ξυνεπείγειν che di solito è riferito alla malattia. Il verbo, del resto piuttosto raro in tutta la letteratura greca, è attestato una sola volta nel *CH* in *Epid.* 1.18, è invece molto gradito ad Areteo che lo usa specialmente nella formula fissa ἦν + congiuntivo. All'origine di questa predilezione c'è certamente l'espressione συνεπείγειν ἐπὶ τὸ κάκιον, di *Epid.* 1.8 (2.628,7 L. = 1.160 Jones) ἀποστάσιες ἐγίνοντο, ἢ μέζους, ὥστε ὑποφέρειν μὴ δύνασθαι, ἢ μείους, ὥστε μὴδὲν ὠφελεῖν, ἀλλὰ ταχὺ παλινδρομεῖν, καὶ ξυνεπείγειν ἐπὶ τὸ κάκιον. Areteo riprende questo sintagma a 5.10.1 (p. 113,29 Hude), nella terapia della pleurite: ἦ τε ὁδὴν τοῦ ὑπεζωκότος ξυνεπείγει ἐπὶ τὸ κάκιον e usa il verbo altre due volte nello stesso capitolo, cfr. 5.10.12 (p. 116,16 Hude) ἦν ξυνεπείγῃ τὸ ἄλγος e 5.10.18 (p. 118,7 Hude) ἦν δύσπνοια ξυνεπείγῃ. Con un complemento ξυνεπείγειν si trova ancora in 5.4.11 (p. 105,2 Hude), nella terapia dell'apoplessia, ἦν δὲ. . . καὶ ἐς τὸν κίνδυνον οἶδε ξυνεπείγῃ. Senza complemento si trova in 6.2.5 (p. 122,1 Hude) nella terapia dello sputo di sangue: ἦν δὲ ξυνεπείγῃ ἡ αἰμορραγία, in 6.2.14 (p. 124,5 Hude): ἦν μὲν ὧν ξυνεπείγῃ ἡ φορὴ e in 6.4.4, nella terapia della *cholera* (p. 131,26 Hude): ἦν δὲ ξυνεπείγῃ πάντα.

6.4.4 (p. 133,4 Hude) nella terapia dell'ileo: χρὴ ὧν μήτε μικρότερόν τι γίνεσθαι τὸν ἡτρὸν τοῦ πάθεος μήτε βραδύτερον. Si veda anche 4.12.6 (p. 83,28 Hude), nel capitolo sull'artrite e la sciatica, dove il ritardo è dovuto alla diagnosi tardiva: διὰ τὸδε ἐς ἀνήκεστον ἐτράπη, ὅτι περ τῇσι ἀρχῇσι, ὁκότε ἀσθενεστάτη ἐστὶ ἡ νοῦσος, ὁ ἡτρὸς οὐκ ἐνίσταται.³⁰

3) E infine, nel capitolo sulla terapia della melancolia cronica (7.7), Areteo riprende, ampliandola, un'altra frase di questo primo capitolo di *Progn.* per giustificare il limite del successo terapeutico:

Aret. 7.7.10 (p. 158,6 Hude) ὑγίεας μὲν ὧν ἅπαντας ποίειν ἀδύνατον τοὺς νοσέοντας· ἦν γὰρ ἂν ἡτρὸς κρέσσων θεοῦ.	Hipp. <i>Progn.</i> 1 (2.110,8 = 193,7 Alexanderson): ὑγίεας μὲν γὰρ ποιεῖν ἅπαντας τοὺς νοσέοντας ἀδύνατον.
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Il riferimento alla divinità, che manca in *Prognostico*, è invece un motivo ricorrente in Areteo, cfr. p. 62,6 Hude, nel capitolo sull'idropisia (4.1.1): “alcuni sfuggono per fortuna o per intervento degli dei piuttosto che grazie alla medicina infatti tutte le malattie più grandi le curano solo gli dei” e 4.1.12, p. 64,32 Hude: “in questa malattia (l'idropisia ascite) il medico deve abbandonare l'uomo tutto: questa malattia infatti non è facile neppure per gli dei”. Qui il riferimento ai limiti propri della natura umana funge da chiosa alla riflessione del *Prognostico*.

Officina del medico

Il carattere di questo breve scritto che, come risulta dal commento di Galeno, poteva essere inteso come una sintetica introduzione alla pratica medica, ne fa un buon candidato per essere invocato in contesti di valore metodologico. Ed in effetti proprio un segmento del suo capitolo proemiale (3.272,2 L. = 30,2 Kühlewein) ἀπὸ τῶν μεγίστων, ἀπὸ τῶν ῥηίστων. . . . ἃ καὶ ἰδεῖν καὶ θιγεῖν καὶ ἀκοῦσαι ἔστιν, detta le coordinate per l'esposizione di sintomi che vengono distinti secondo la loro possibilità di essere percepiti alla vista, al tatto e all'udito.

³⁰ Col verbo ἐνίστασθαι, che torna a p. 161,16 Hude, Areteo riprende l'immagine ippocratica del combattimento, ben illustrata da Jouanna (1999) 27 ss., che, oltre che nel *Prognostico*, si trova in *Nat. hom.* 9 (6.52 L. = 188,7 Jouanna) δεῖ τὸν ἡτρὸν ἐναντίον ἵστασθαι τοῖσι νοσήμασι e *Flat.* 1 (6.92,4 L. = 104,3 Jouanna) ἐπιστάμενος τῷ νοσήματι.

Questo stesso capitolo è ripreso, interpretato e riusato nella descrizione dei sintomi dell'*hydrops* (4.1.5 p. 63,8 Hude): σημεία δὲ μέγιστα καὶ ῥήιστα ἰδεῖν καὶ θιγέειν καὶ εἰσακοῦσαι.³¹

Un'altra ripresa di *Officina* si trova in 3.7.3 (p. 44,24 Hude) nel capitolo sulla paralisi; di essa Areteo dice che colpisce non solo le parti 'separate' (*diestota*) e 'omonime' (*homonyma*) e 'appartenenti alla stessa coppia' (*homozyga*), come sono gli occhi, le braccia, le gambe, ma anche quelle 'unite' (*symphyrea*), come il naso, e la lingua ecc.; la coppia di termini *homonyma* e *homozyga* si trova solo in Areteo e in *Off.* 16 (3.322,2 L. = 41,13 Kühlewein) e nel relativo commento di Galeno (3.25, 18B.869.10 K.); qui Areteo impreziosisce l'opposizione *diestota* / *symphyrea* riprendendo la terminologia ippocratica.

Epidemie VI

A *Epidemie VI*, che è tra i testi più oscuri di tutto il *CH*, Areteo attinge con frequenza. Si sono già visti sopra i casi di *Epid.* 6.4.7 (ἔσοδοι, λόγοι); 6.4.8 (ὡς δέχεται μὲν τὸν ἥερα); 6.4.19 (δύο δὲ μεγάλων); a questi se ne aggiungono almeno altri quattro, due dei quali, *Epid.* 6.4.18 (5.312,1 L. = 94 Manetti-Roselli) ὕδωρ βορὸν, ἀγρυπνίη βορὸν e *Epid.* 6.4.15 (5.310,10 L. = 94 Manetti-Roselli) ὕπνος ἐδραῖος, ὀρθῶ νυσταγμός,³² si possono annoverare tra le frasi che hanno dato più filo da torcere agli esegeti antichi, secondo quanto sappiamo dal commento di Galeno.

Di *Epid.* 6.4.18, Areteo 3.6.9 (p. 43,11 Hude) riprende solo il secondo elemento nel capitolo sulla *manie*; se la *manie* si aggrava i malati "hanno ventosità, nausea, sono voraci e sregolati nel cibo (βοροὶ καὶ λάβροι); infatti sono insonni, e l'insonnia è vorace (ἀγρυπνίη δὲ βορὸν)".³³

La ripresa di *Epid.* 6.4.15 si trova nella rassegna dei sintomi della *cachexia*. Areteo 3.16.5 (p. 61,12 Hude) scrive: ὕπνος ἐδραῖος μὲν οὐδαμῇ, κεκλιμένῳ δὲ νυσταγμός. Egli così riformula la sentenza di *Epidemie*, che unisce due segmenti in paratassi, opponendo il primo al secondo elemento. Il testo era di difficile comprensione già per gli antichi commentatori. Galeno si limita a riportare due delle molte spiegazioni che erano state proposte (a suo giudizio le più ragionevoli)

³¹ Si noti che questa ripresa di *Officina* segue immediatamente il riecheggiamento ippocratico di *Epid.* 6.4.19 (già segnalato sopra, p. 423): δυοῖν μεγάλων μέζον κακὸν τὸ ἔκγονον. Sul significato di questa ripresa cfr. Deichgräber (1971a) 27.

³² I due confronti sono stati segnalati da Petit (1726) 457 e 489.

³³ Sulla fortuna di questa massima, cfr. Roselli (1999).

e, prudentemente, rinuncia a indicare quale sia preferibile. L'aggettivo *hedraios*, dice Galeno *ad loc.* p. 223 Wenkebach, è stato inteso o in senso proprio, come 'seduto' e dunque opposto a 'ritto/in piedi' ("sonno da seduto, per chi è in piedi sonnolenza") trasferendo al sonno una proprietà del soggetto che dorme,³⁴ oppure nel senso di 'profondo', opponendo il sonno profondo alla sonnolenza ("sonno profondo; per chi resta in piedi (?) sonnolenza"). Areteo, che oppone a *hedraios* il participio *κεκλιμένω*, è testimone della prima interpretazione;³⁵ egli tuttavia testimonia anche una diversa opposizione, tra stare seduti e stare sdraiati, applica cioè la consueta tecnica di modificare il dato testuale e di servirsi soltanto degli elementi linguistici.

Una ripresa più estesa di *Epidemie* 6,³⁶ si trova in 8.6.1, nel capitolo sulla terapia degli stomachici. Areteo osserva che, diversamente da quanto avviene in altre malattie, la *diaita* fatta di esercizi passivi, passeggiate, esercizi ginnici, esercizi vocali e cibi adatti a combattere la cattiva disposizione dello stomaco non sono sufficienti per risolvere un'incapacità di digerire che si protrae da tempo e per rimettere in carne il corpo dimagrito; per questi pazienti soprattutto, dice Areteo, si impieghino αἱ τοῖσι κάμνουσι χάριτες (*Epid.* 6.4.7):

Aret. p. 165,11 Hude πολλὸν δὲ μέζον ἐπὶ τουτέων ἔστων αἱ τοῖσι κάμνουσι χάριτες καὶ τὸ καθαρῶς ἅπαν δρῆν καὶ τῆσι ἐπιθυμίῃσι ἔπεσθαι τὸν ἰητρὸν, μὴ μεγάλα βλάπτοντα· ἄριστον γὰρ τόδε, ἣν μὴ κάρτα ὠφελεύντων ὀρεξίς ἤκη.

Hipp. *Epid.* 6.4.7 (5.308,13 L. = 86 Manetti-Roselli) αἱ τοῖσι κάμνουσι χάριτες, οἷον τὸ καθαρῶς δρῆν ἢ ποτὰ ἢ βρωτὰ ἢ ἂ ἄν ὀρᾶ, μαλακῶς ὅσα ψαύει· ἄλλαι· ἃ μὴ μεγάλα βλάπτει.

Hipp. *Aph.* 2.38 (4.480,17 = 4.116 Jones): τὸ σμικρῷ χειρὸν καὶ πόμα καὶ σιτίον, ἥδιον δέ, μᾶλλον αἰρετέον.

Il titolo del paragrafo di *Epid.* 6.4.7 diventa la prima delle cose che Areteo raccomanda e, come si evince dal contesto e dagli altri passi che esamineremo, le *charites* consistono essenzialmente nel compiacere

³⁴ Per quanto ci è testimoniato il nesso ὕπνος ἐδραῖος non è stato mai più ripreso nella letteratura medica e non vi sono altre attestazioni al di fuori di essa.

³⁵ Sulla base di Areteo è stato inteso il passo in Manetti—Roselli (1982) 95. Petit (1726) 489 ha scelto l'interpretazione 'sonno profondo' preferita da Galeno.

³⁶ Cfr. *Additamentum* (1958), 173.

ai gusti alimentari del malato. Τὸ καθάρως δρῆν, che in *Epidemie* era un esempio di *charis*, diventa un secondo elemento, coordinato col primo; esso, ampliato con ἅπαν, riassume le parole ἢ ποτὰ ἢ βρωτὰ ἢ ἃ ἂν ὀρεῖ, μαλακῶς ὅσα ψαύει del passo ippocratico. Compiacere ai desideri senza arrecare un danno significativo riprende ἃ μὴ μεγάλα βλάπτει di *Epidemie* ma anche *Aph.* 2.38,³⁷ secondo il quale sono preferibili bevande e cibi meno adatti per la malattia ma più graditi.³⁸

L'espressione αἱ τοῖσι κάμνουσι χάριτες è a sua volta ripresa nella forma χρὴ γὰρ καὶ τοῖσι κάμνουσι χαρίσασθαι a 6.2.7 (p. 122,21 Hude) nella composizione di un *emplastron* per curare lo sputo di sangue: col solito γάρ, che segnala il ricorso all'autorità di Ippocrate, Areteo giustifica l'uso di eccipienti che danno al preparato un buon odore; di nuovo, nello stesso capitolo, a 6.2.17 (p. 125,1 Hude), la norma è richiamata per una prescrizione dietetica "se vuoi fare cosa gradita (χαρίσασθαι) gli sia concesso di prendere coriandolo a piacere, se gli piace". Così ancora a 7.5.3 nella terapia della malinconia (p. 156,22 Hude), si consiglia di dare un po' di vino e altri cibi graditi (τῆς ἄλλης τῆς ἐν τῇ τροφῇ χάριτος). Questa compiacenza alimentare è stata identificata da Areteo come una delle virtù del medico nel proemio del III libro, là dove egli, accingendosi a trattare delle malattie croniche, particolarmente dolorose e fastidiose per i pazienti, tratteggia la figura del medico ideale, cfr. p. 36,12 Hude καὶ χάριτος ἀβλαβοῦς τῶν ἡδέων, una sintesi di *Epid.* 6.4.7 e *Aph.* 2.38.³⁹

A 7.4.8 nel capitolo sulla terapia dell'epilessia, Areteo riprende un altro elemento di *Epid.* 6.4.7 (ἃ μὴ μεγάλα βλάπτει), o, più probabilmente, la massima ὠφελεῖν ἢ μὴ βλάπτειν di *Epid.* 1.11 (1.164 Jones), integrandola con la massima di *Epid.* 6.2.12 (5.284,1 L. = 36 Manetti-Roselli) μηδὲν εἰκῆ, μηδὲν ὑπερορᾶν.⁴⁰ Cfr. p. 154,10 Hude:

³⁷ Come già segnalò Deichgräber (1971a) 11, la relazione tra *Epid.* 6.4.7 e *Aph.* 2.38 si trova anche nel commento di Galeno al passo di *Epidemie* p. 198 Wenkebach; deve trattarsi di un nesso costituitosi nella prassi dell'esegesi ippocratica.

³⁸ L'aforismo, qui parafrasato da Areteo, in altri due luoghi è citato quasi letteralmente: nella terapia dei cardiaci, a 6.3.8 (p. 127,22 Hude) e nella terapia del fegato, a 7.13.4 (p. 160,30 Hude) dove si parla, sempre in relazione al verbo χαρίζεσθαι, di cibo gradito (ἡδεῖα) anche se un po' più dannoso (κτὴν μικρὸν χεῖρων ἔη / κτὴν μικρῶ χεῖρων τῶν ὠφελεύντων ἔωσι).

³⁹ Per l'analisi di questo proemio si veda Deichgräber (1971a) 8-12 e poi Roselli (2001) 246-256. E si veda Deichgräber (1971b).

⁴⁰ Cfr. Deichgräber (1971a) 38.

νῦν δὲ χρή οὐδὲν ὑπερορῆν μηδὲ πρήσσειν τι εἰκῆ,⁴¹ μάλιστα μὲν ἐφ' ἐκάστοις μικροῖσι πάντως ὠφελεῦντα· ἦν δὲ <μή>, βλάττοντα μηδέν.⁴²

Il commento di Galeno (2.28, 17A.951 K. = p. 91,1 ss. Wenkebach) applica la massima μηδὲν ὑπερορῶν, μηδὲν εἰκῆ ai medici che accettano supinamente quanto leggono nei libri di medicina, ma parla anche di una sua applicazione più specifica come divieto di usare rimedi non sperimentati (e forse non sarà un caso se nel testo di Areteo questa citazione fa seguito alla menzione di terapie magiche e contaminanti, come bere sangue umano e mangiare fegato umano).⁴³ Anche in questo caso, che non contraddice il richiamo alla necessità di sperimentare nuove terapie (*supra* 421), Areteo assume un principio metodologico ippocratico, e lo fa nel contesto di una malattia difficile (νῦν δέ).

E infine segnalo una possibile eco di *Epid.* 6.2.12 (5.284,1 L. = 36 Manetti-Roselli) (ἐκ προσαγωγῆς τάναντία προσάγειν) in Areteo 6.2.21 (p. 125,23 Hude), nel capitolo sulla terapia dello sputo di sangue: ἐς τάναντία ἐκ προσαγωγῆς ἢ μεταβολῇ καὶ μηδὲν ἄγαν. Qui, per dare peso alle parole ippocratiche, viene aggiunta ad esse una famosa massima sapienziale (μηδὲν ἄγαν).

Aforismi

Concludo la rassegna delle riprese ippocratiche con un omaggio a Deichgräber⁴⁴ che ha identificato nel proemio al primo libro *Sulle cause e i segni delle malattie croniche* (3.1 Hude) l'imitazione della sintassi di *Aph.* 1.1 e insieme la ripresa di un passo della catastasi di *Epid.*

⁴¹ Il lemma del commento di Galeno (17A.951 K. = CMG V 10 2 2, p. 91,1 Wenkebach), nel ms. Marciano presenta l'ordine inverso rispetto a quello dei mss. ippocratici, del lemma di Galeno in versione araba e del lemma di Palladio (che è μηδὲν εἰκῆ, μηδὲν ὑπερορῶν); l'ordine del lemma marciano è coerente col commento: Galeno prima spiega μηδὲν ὑπερορῶν e poi μηδὲν εἰκῆ, e in questo stesso ordine cita la massima alla fine della sezione del commento stesso (*ibid.*, 953) eap. 3 954 K. = p. 92,11 e 18 Wenkebach). Diller (1950) 229 ha proposto di adottare l'ordine del Marciano; Areteo potrebbe confermare la preferenza per quest'ordine nella tradizione esegetica anteriore a Galeno.

⁴² La ricostruzione ἦν δὲ <μή> di Hude, come mi segnala Alessandro Lami, contraddice all'uso che vuole le ellittiche negative nella forma εἰ δὲ μή. Non escluderei che l'evidente guasto del testo debba essere sanato scrivendo πάντως ὠφελεῦντα μηδὲ βλάττοντα μηδέν.

⁴³ Il verbo ὑπεροράω non ha molte altre attestazioni in contesti medici ma torna tre volte in Areteo e sempre in forma negativa, come un'eco della prescrizione di *Epidemie*, cfr. 5.10.16 (p. 117,18 Hude); 6.1.4 (p. 119,25 Hude); 7.2.1 (p. 144,19 Hude).

⁴⁴ Cfr. Deichgräber (1971a) 8 s.

1.8 (2.628,3 L. = 1.160 Jones), ed è riuscito, con piccoli interventi testuali, a rendere leggibile il doppio confronto con Ippocrate, che non è affatto perspicuo nell'edizione Hude:

Aret. 3.1 p. 36,4 ss. Hude:
 χρονίων νούσων· πόνος μὲν
 πουλύς, χρόνος δὲ μακρός,
 ξύντηξις κακή[#], ἀβέβαιος ἡ
 ἄλθεξις

[#] μακρός, ξύντηξις κακή
 Deichgräber: μακρὸς ξυντήξιος
 καὶ codd. edd.

Hipp. *Aph.* 1.1 (4.458,2 L. = 4.98 Jones): ὁ βίος βραχύς, ἡ δὲ τέχνη μακρά, ὁ δὲ καιρὸς ὀξύς, ἡ δὲ πείρα σφαλερά, ἡ δὲ κρίσις χαλεπή

Hipp. *Epid.* 1.8 (2.628,3 L. = 1.160 Jones): γενομένων δὲ χρόνων μακρῶν καὶ πόνων πολλῶν καὶ κακῆς συντήξις κτλ.

CONCLUSIONI

L'intreccio di forma dell'aforismo e contenuto della catastasi che Areteo ha realizzato nell'ultimo dei passi che abbiamo citato non solo testimonia della sua abilità nel rielaborare e fondere segmenti testuali ippocratici diversi ma anche presuppone la capacità dei suoi lettori di riconoscere un artificio così raffinato. È però anche vero che i testi che Areteo usa come fonte di autorità e di formulazioni icastiche sono gli stessi che sappiamo essere stati ripetutamente oggetto di commento; quei testi cioè che erano più studiati e meglio conosciuti. Essi hanno mediato contenuti dottrinali ma anche norme di comportamento medico. La scelta che Areteo fa di citazioni tratte da capitoli proemiali è facilmente comprensibile sia per la qualità dei loro contenuti sia per la loro facile riconoscibilità. Pur mostrando tratti che gli sono peculiari,⁴⁵ Areteo è anche un anello (e probabilmente non un caso isolato) di quella catena che ha sostenuto e ha continuamente rivitalizzato la figura del medico elaborata negli scritti ippocratici più antichi.

⁴⁵ Come per esempio la *sympatheia* col malato, per cui cfr. Deichgräber (1971a).

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HIPPOCRATES IN THE CONTEXT OF GALEN:
GALEN'S COMMENTARY ON THE CLASSIFICATION OF
FEVERS IN *EPIDEMICS* VI

In-Sok Yeo

Summary

This paper elucidates the relationship between Hippocrates and Galen concerning the classification of fever and illustrates Galen's use and abuse of Hippocrates. Galen used Epidemics VI in order to justify his own arguments on the classification of fever, based on the three forms of matter. A close examination of Galen's use of Epidemics VI does not support his justification. It turns out that it was Galen's theory-laden eyes that made Epidemics VI a founding ground for his fever theory.

Classifying fever has been a primary concern in Western medicine from the time of Hippocrates through to the nineteenth century.¹ In the Hippocratic corpus, a variety of names for fevers or feverish affections exists, including quotidian, tertian, quartan, semitertian,² *epialos*³ and the famous *causus*.⁴ In fact, fever is the most common disease entity mentioned in the Hippocratic collection. The Hippocratic writing *Epidemics* is full of case histories of fever patients, which describe symptoms and offer prognoses. However, curiously enough, fever in the Hippocratic collection has not been a highlighted subject of historical investigation. And, similarly, little attention has been paid

¹ For a history of fever theory see Bynum and Nutton (eds.) (1981).

² This is a mixture of quotidian and tertian fever. For the history of semitertian fever see Jarcho (1987) 411–430.

³ There is no agreement on the concept of this disease entity. Galen considered it to be a fever characterised by the simultaneous presence of shivering and fever; see *On Differences of Fever* 2.6 (7.47 K.). For others, this disorder was not a fever but a nightmare (see Aristophanes, *Wasps* 1038).

⁴ A disease entity that can be translated as ardent fever, but does not correspond to any disease entity recognised by modern medicine. This is a clinical entity defined by a core of cardinal symptoms accompanied by other peripheral and inconstant symptoms. For the details see Grmek (1994) 416–420.

to fever theory. This situation is partly due to the heterogeneity of the corpus and the resulting difficulty of finding theoretical coherence. Of the studies carried out on the diseases mentioned in the Hippocratic collection, including fever, most have been centred on making a retrospective diagnosis.⁵ The situation is a little bit different with Galen. Compared with the relatively rich assessments of Galen's physiology,⁶ his pathology still remains relatively unexplored. With regard to Galen's fever theory in particular, we have a summary of his theory on intermittent fever⁷ and the later impact of his theory.⁸ Sticker wrote a more comprehensive study on the fever theories of ancient medical writers, and the present study is largely indebted to his pioneering work.⁹ In fact, he already pointed out that Galen's classification of fevers is grounded in *Epidemics* VI,¹⁰ but he did not develop this point further. The present study starts where Sticker stopped. And, in so doing, it elucidates the relationship between Hippocrates and Galen in the classification of fevers. It also illuminates Galen's use and abuse of Hippocrates, which he employed in order to justify his own arguments. Such activity is typical of Galen's Hippocratism¹¹ or, in other words, for the way in which Hippocrates is placed in the context of Galen.

Fever was a very common pathological phenomenon. The term was widely used as a generalised name for indicating either a variety of febrile symptoms or different disease entities. In fact, any disease with a febrile symptom was regarded as a kind of fever. The generality, and the resultant ambiguity, surrounding the use of 'fever' is reflected in the complexity and controversiality of theories explaining fevers.

In reading the Hippocratic corpus, it is difficult to draw a coherent and systematic theory of fever, since this collection is actually a heterogeneous compilation of treatises written by different authors at different periods. Moreover, Hippocratic authors tended to regard fever as an accidental symptom rather than an independent disease

⁵ Grmek (1994) 409–436 has carried out this task with masterly erudition and multidisciplinary scholarship. See especially his analysis of diseases in *Epidemics*. See also the study of Siegel (1960) 77–98.

⁶ Siegel (1968); Harris (1973) 267–431; Debru (1996).

⁷ Wittern (1989) 3–22.

⁸ Lonie (1981) 19–44.

⁹ Sticker (1928), (1929), (1930).

¹⁰ Sticker (1929) 361.

¹¹ For Galen's Hippocratism in general see Smith (1979) 61–176.

entity, based firmly on substance. In fact, it was not until Galen's theory of fever¹² that we find a more coherent and systematic form. Concerning the status of fever, he asserts explicitly that fever is a disease, not a symptom.¹³

Galen's fever theory influenced later medical writers, and its impact persisted until the eighteenth century.¹⁴ The number of fevers thought to exist has increased ever since the first classification of fevers was proposed in antiquity. The so-called 'fever literature' has multiplied considerably following the invention of printing, and has comprised a very large part of all medical literature well into the nineteenth century. For example, the nineteenth-century Paris physician Philip Pinel, strongly inspired by the classification of animals, plants and minerals in natural history,¹⁵ wrote a book on the classification of diseases, and dedicated a whole volume of his three-volume *Nosographie philosophique* to the classification of fevers. In it, he distinguished thirty-six fevers according to order, genus and species.¹⁶

Rene Laënnec, who devised the stethoscope, and who was a contemporary of Pinel, was sceptical about the validity of classificatory medicine, which was en vogue at this time.¹⁷ He refused to give the same ontological status or independent reality to a disease as had been given to animals and plants. His disapproval of classificatory medicine is also reflected in his ideas on the nosology of Hippocratic medicine. He was accurate in his claim that 'Hippocrates attached

¹² It would be an immense task to survey all the statements about fever scattered in Kühn's edition. The treatises of Galen that deal mainly with fever are as follows: *Diff. Febr.* (7.271–405 K.), *De typis* (7.463–474 K.), *De crisibus* (9.550–768 K.), *Ad Glauconem de methodo medendi* (11.1–70 K.).

¹³ Gal. *Ad Glauconem* 1.4 (11.17 K.).

¹⁴ About ten commentaries on *Diff. Febr.* were published between the sixteenth and the seventeenth century. To list them: Tommaso del Garbo (1514), *Commentaria: non parum utilia in libros Galeni De febrium differentiis*; Cristoval de Vega (1553), *Commentaria in librum Galeni De differentia febrium*; Jacques Dubois (1555), *Jacobi Sylvi Commentarius in Claudii Galeni duos libros De differentiis febrium*; Hector Gibault (1561), *In Cl. Galeni Pergameni libros de febrius commentarius*; Panfilo Monti (1565), *Commentarii in Galeni libros De febrium differentiis*; Francisco de Valles (1569), *Commentaria in libros Galeni De differentia febrium*; Vettore Trincavello (1575), *In Galeni libros De differentiis febrium*; Juan Bravo (1596), *In libros Galeni De differentiis febrium commentaria*; Simone Acampo (1642), *Commentaria in libros Galeni De differentiis febrium*; Juan Bautista Navarro (1649), *Commentarii ad libros Galeni De differentiis febrium*.

¹⁵ For the classification of plants, animals and diseases see Dagognet (1970) 125–187.

¹⁶ Pinel (1802).

¹⁷ Dagognet (1970) 146–147.

less importance to diagnostic signs than to prognostic signs . . . hence it would be almost impossible to establish a Nosology of Hippocrates'.¹⁸ Although there are many names of fevers in the Hippocratic collection, Laënnec viewed it as a rash decision to acknowledge each of them as denominating a separate disease entity, as his nosographical colleagues had done. 'Hippocrates considered all the symptoms epiphenomena or complications,' he argued, 'whereas the moderns regard these as distinctive species of each fever.'¹⁹

Although the classification of a fever was not a major concern of Hippocratic authors, some tentative distinction between fevers does exist in the Hippocratic corpus. One grouping is based on the periodicity of febrile crises. Malaria, for example, showed a characteristic pattern of periodic febrile crisis, and this served as a good criterion for distinguishing this type of fever. This pattern was widely discussed, as malaria was a highly prevalent and fatal disease throughout the Mediterranean area during antiquity.²⁰ Fevers became identified with particular cycles. We find not only the quotidian, the tertian and the quartan fevers, but also quintans, septans, and even the nonans.²¹ The author of the Hippocratic work *Nature of Man* proposed a classification of fever based on its periodicity, and this periodicity was explained in terms of yellow bile. Accordingly, four kinds of fever were thought to exist: the continued, the quotidian, the tertian, and the quartan. The continued comes from the most abundant and the purest bile, and the crisis develops most quickly. The quotidian comes after the continued in terms of quantity and purity of the yellow bile, and it ceases more quickly than any of the other fevers, with the exception of the continued. The tertian and the quartan are the next in the order, and are proportional to the quantity and quality of the concerned bile, which is also proportionally reflected in the duration of their crises.²²

Although a classification of fevers based upon different cycles became widely accepted during antiquity, no agreement of explanation existed

¹⁸ Laënnec (1804) 17.

¹⁹ Laënnec (1804) 26.

²⁰ See the classical work of Jones (1909). Although Jones seems to have overemphasised the influence of malaria on Mediterranean area, this does not mean that malaria was not prevalent in this area. For a recent study of this subject see Sallares (2002).

²¹ *Epidemics* 1.26 (p. 184.18 Jones = 2.682 L.).

²² *On the Nature of Man* 15 (p. 202.12 Jouanna = 6.66 L.).

as to the causes of these different cycles. One classification, proposed by the author of *On the Nature of Man*, argued that the type of fever is determined by the quantity and quality of the yellow bile. This argument was discredited by many of his contemporaries as well as by his successors, including Galen. By Galen's time the classification of fevers had become more systematic and elaborate. Unlike the explanation of the origin of each fever in *On the Nature of Man*, Galen argued that different humours should be thought to give rise to fevers with different cycles. Phlegm, for example, was responsible for the quotidian, yellow bile for the tertian and black bile for the quartan.²³ This theory appears to have been original to Galen. More importantly, this theory exerted a persistent influence upon fever theory throughout Western medicine for over a thousand years. Later medical writers, such as Oribasius,²⁴ Alexander of Tralles²⁵ and Pseudo-Alexander of Aphrodisias²⁶ accepted Galen's classification of fever, although some disagreed with his recommended treatment.²⁷

Disagreement over the kind of humour underlying precise cycles of fever was of no concern to Galen. What really mattered to him was the duration of each fever. As proposed by the author of *On the Nature of Man*, the duration of each fever was proportional to the quantity and the quality of the yellow bile in question. Accordingly, the quotidian had a shorter duration than the tertian, and the tertian in turn was shorter than the quartan. However, this did not agree with the writings of more authentic case-based treatises, like *Aphorisms*²⁸ and *Epidemics* I. These works argued that the tertian fever comes to a crisis quickest.²⁹ As a result, like many commentators of Hippocrates, Galen did not consider this section of *On the Nature of Man* authentic, nor did he agree with the other exegetes, particularly Sabinus, who claimed that Polybus was the author of this part of the treatise. Galen was very critical of the author, calling him a sophist (*sophistês*) and a cunning person (*panourgος* *anthrôpos*). He regarded this

²³ Gal. *Diff. Febr.* 2.1 (7.334–336 K.).

²⁴ Oribasius, *Libri ad Eunapium* 3 (pp. 648, 655, 659 Bussemaker).

²⁵ Alexander of Tralles, *On Fevers* 1, 2, and 5 (vol. 1, pp. 291, 311, and 371 Puschmann).

²⁶ Alexander of Aphrodisias, *On Fevers* 15 (p. 12,25–8 Tassinari = 1.91 Ideler).

²⁷ In particular, Alexander of Tralles was critical of Galen's therapeutic method on fever. See Alex. Trall. *Febr.* (vol. 1, pp. 297, 301, 333 Puschmann).

²⁸ *Aphorisms* 4.59 (p. 150 Jones = 4.524 L.).

²⁹ *Epidemiai* (henceforth *Epid.*) 1.24 (p. 182.19 Jones = 2.674 L.).

section of the treatise as being more recent, on the grounds that ‘the term “continuous” (*sunochos*) is the proof that the added sections are more recent. For in no place does Hippocrates, nor any other ancient writer, call the “constant” (*sunechês*) fever “continuous” (*sunochos*)’.³⁰

Plato proposed a similar classification of fevers, based on four elements. In the *Timaeus* he claimed:

The body suffering from an excess of fire ends up with constant inflammations and fevers; the one suffering from an excess of air, with quotidian fevers; tertian fevers afflict one suffering from an excess of water, on account of being more sluggish than air and fire; and an excess of earth, the fourth, most sluggish element of all, which, having been purged, hardly ceases in a fourfold period of time, causes quartan fevers.³¹

Plato’s classification depended on the quality of each element, and he related each fever to the characteristic quality of each element. It follows, then, that, the more sluggish the element in question, the longer the duration of the fever crisis. As a result, the quotidian has the shortest duration, followed by the tertian, which in turn has a shorter duration than the quartan. This argument is clear and persuasive, but Galen disagreed with Plato. He thought, ‘to the extent of plausibility, these things are well said, but the result of the investigation of actual practice disproves the account’.³² It was not the clarity or coherence of a doctrine that mattered to Galen, but rather the clinical facts in relation to what he had experienced in his patients. A theory is valid only when it fits well with the facts. According to his own experience, it was the tertian fever that came to crisis the most quickly. That is why Galen attributed yellow bile, the hottest humour, to the tertian.

Contrary to his critical attitude toward the two aforementioned fever classifications, the one in *On the Nature of Man* and the other in the *Timaeus*, Galen agreed with the description in *Epidemics* VI.³³ In language and style, it is simple and implicit, at times too simple, which ultimately hinders our understanding. The relevant phrases in question are:

³⁰ *Commentary on Hippocrates’ On the Nature of Man* 2.22 (15.172 K.). The translation is Lewis’ (<http://eal1785.org/medant/GnatHom2.htm>).

³¹ Plato, *Timaeus* 86 a 3. The translation is Jowett’s.

³² Gal. *In Hipp. Nat. Hom. Comm.* 2.22 (15.171 K.).

³³ In fact, this treatise is regarded as notes or raw materials for future publication.

Fever: some are pungent to the touch, some gentle. Some are not pungent but increasing. Some are sharp but decreasing to the touch, some are straightaway burning hot, and some are faint throughout. Some dry, some salty, some with blisters dreadful to see. Some damp to the touch. Some are red, some livid, some yellow. And so on.³⁴

Galen seems to have valued this statement very highly and regarded it as the most accurate description of fever in the entire Hippocratic collection. He wrote a long commentary on these phrases in his commentary on *Epidemics* VI, and he cited them at the beginning of his treatise *On the Differences of Fever*, a treatise that epitomised his own theory on fever.³⁵ He seems to have cited the phrases in question with a view to justify his whole argument on the differences³⁶ between fevers. He supported the classification of fevers, as described in *Epidemics* VI, as the distinction was based on the substance–essence of unnatural heat. It is the essence of fever, he argued, that serves as a most proper and legitimate criterion for distinguishing each different kind of fever.³⁷ Fever was, by definition, unnatural heat. Accordingly, the different quality of unnatural heat gives rise to the different kinds of fever. Pungent, gentle, sharp and burning hot are the terms that Galen believed best described the essence of unnatural heat that a physician would know by touch.

Galen reported that at least three criteria had been used to distinguish fevers.³⁸ One, described as ‘more or less (*para to mallon kai to hêtton*)’, related to the quantity of the heat. Another was based upon the substance in which this unnatural heat was held; the third was made according to particular movements.³⁹ Concerning the first criterion, even though some doctors readily used the names big or

³⁴ *Epid.* 6.1.14 (pp. 222, 224 Smith = 5.274 L.). The translation is Smith’s.

³⁵ *Gal. Diff. Febr.* 1.1 (7.274 K.).

³⁶ ‘Difference’ is not exactly equivalent to the Greek word *diaphora*. For *diaphora* indicates not only a difference, but also a different kind itself.

³⁷ *Gal. Diff. Febr.* 1.1 (7.273 K.).

³⁸ Pseudo-Alexander of Aphrodisias constructed a different scheme of classification with the same components. At first, he divided fever into two categories: one essential (*ousiôdê*), another non-essential (*epousiôdê*). The essential kind included a division by the quantity of heat, whereas Galen considered the division improper and attributed primary importance to the division by substance. Alexander, on the other hand, regarded the division by substance as non-essential. In Alexander’s classificatory scheme, divisions were made according to substance, mode of movement, and the accidental belonging to the non-essential division of unnatural heat. See Alex. Aphr. *Febr.* 31 (pp. 27–8 Tassinari = 1.105–106 Ideler).

³⁹ *Gal. Diff. Febr.* 1.1 (7.275 K.).

small fever, Galen considered this improper, since heat, in his view, was a qualitative and not a quantitative phenomenon. He argued that the third criterion, movement, was also improper; for movement cannot be essence or substance. The Hellenistic physician Erasistratus had claimed that the essence of fever consisted in the movement of arteries,⁴⁰ or more precisely the movement of the blood in the arteries. Galen, however, did not think that the movement of arteries could be the essence of fever. Galen wanted a criterion with a more firm and substantial grounding. As a result, it followed that the second criterion agreed more closely with Galen's notion.

Three types of matter were thought to hold unnatural heat: air, liquid and solid bodies. It was Galen's idea to divide fever according to these three forms of material that carry the unnatural heat. Later medical writers, like Pseudo-Alexander of Aphrodisias and Palladius,⁴¹ utilised Galen's division. Although it was Galen who made the first explicit division of fever in relation to the three forms of matter, he uncharacteristically viewed his own classification with caution. Indeed, Galen relied heavily on Hippocratic writings to justify his own classification. Referring again to *Epidemics* VI, Galen commented: 'Now, I think, it is sufficient to know such a thing as what Hippocrates said when he indicated what is containing (*ta ischonta*), what is contained (*ta enischomena*) and what is rushing in (*ta enormônta*).'⁴² The original phrasing is vague and does not allow any definitive comprehension. The author of *Epidemics* VI simply uses 'what is containing, what is rushing in, what is contained'⁴³ without further explication. Galen interpreted 'the containing' as the solid parts of the body, 'the contained' as the humid part, and 'the rushing in' as the breath.⁴⁴ He provided more details for his interpretation in another treatise:

He (Hippocrates) reminds us of these when he talks of things 'containing', 'contained' and 'rushing in'—calling solids the containing, since they surround and confine the most; the most the contained, since it is surrounded by the solids; pneumata the things rushing in, since the pneumata reach into all of the body in an instant of time easily and without hindrance.⁴⁵

⁴⁰ Galen, *On Hippocrates' Epidemics* VI 1.29 (p. 44.15 Wenkebach = 17A.873 K.).

⁴¹ Palladius *Synopsis de febribus* 4.1 (1.108 Ideler).

⁴² Gal. *Diff. Febr.* 1.2 (7.278 K.).

⁴³ *Epid.* 6.8.7 (p. 280.5 Smith = 5.346 L.).

⁴⁴ Gal. *Diff. Febr.* 1.2 (7.278 K.).

⁴⁵ Galen, *On tremor, palpitation, spasm and rigor* 5 (7.597 K.). The translation is by Sider and McVaugh (1979), p. 191.

In fact, these two statements from *Epidemics* VI provide the foundation upon which Galen attempted to base his theory of fever, particularly in determining the precise species of fever. However, considerable difficulty exists in connecting the two arguments. The first argument underscores the importance of touch in perceiving and distinguishing different fevers. Here, fever is distinguished according to the sharpness, pungency, hotness, dryness and humidity, which are felt by touch. It is natural that, of all the senses, Galen attributes to touch the foremost importance for perceiving fever. For fever, or in other words unnatural heat, was only perceptible by the sense of touch. Although Galen singled out the phrases under discussion as the foundation for his fever theory, he had no small difficulty in interpreting and accommodating them in favour of his fever theory.⁴⁶ ‘Salty (*halmuron*)’ is one of the words that troubled him. How can a fever be salty? Galen himself admitted that ‘what is salty’ is not perceptible by touch, for only taste can grasp it. However, he tried to assimilate it into a touching sensation, that is, a biting and irritating sensation caused by long-lasting contact with salty water or salt.⁴⁷ A much trickier task was to understand ‘pemphigus’ fever. In order to clarify this, Galen unfolded a long argument, citing various verses of ancient authors such as Sophocles and Aeschylus.⁴⁸ After having reviewed all these citations, Galen proposed two possible interpretations of ‘pemphigus’: one, fever with exhalation; another, fever with pustules.⁴⁹ Despite the remaining ambiguity of the text, Galen asserts that pemphigus fever was an airy kind of fever, based on the principle that we can feel the flow of air through our skin.⁵⁰ Once the connection between fever types and their respective touching sensation had been established, Galen made sure that the kind of fever thus perceived needed no further theoretical justification, for its species was then manifest and known as itself, just as human beings are to be identified as such by their proper forms.⁵¹

⁴⁶ Amneris Roselli (1999) 367–373 has analysed in detail Galen’s commentary in question, to show Galen’s method and strategy of commenting the Hippocratic text.

⁴⁷ Gal. *In Hipp. Epid. VI Comm.* 1.29 (p. 46,22 Wenkebach = 17A 877 K.).

⁴⁸ Gal. *In Hipp. Epid. VI Comm.* 1.29 (pp. 48–49 Wenkebach = 17A 879–880 K.). For further discussion of the problems concerning his citation see Wenkebach (1928) 11–12.

⁴⁹ Gal. *In Hipp. Epid. VI Comm.* 1.29 (p. 47,8–9 Wenkebach = 17A 878 K.).

⁵⁰ Gal. *In Hipp. Epid. VI Comm.* 1.29 (p. 47.6 Wenkebach = 17A 878 K.).

⁵¹ Gal. *Diff. Febr.* 1.13 (7.329–30 K.).

Galen, however, was faced with another problem, no less tricky than the former. Difficulties arose in associating the manifest, readily perceptible to touch, with one of the three forms of matter. For example, from what substance did the pungent fever arise? Was it an airy, humoural, or solid substance? What about biting, dry, burning and salty fevers? To explain this association, Galen provided no evidence. Thus, an overt discrepancy appears between his coherent and systematic theory of fever and the supporting evidence he drew from Hippocrates. He chose not to connect them in ways that would help our interpretation nearly two millennia later. Galen may have misunderstood what the names of fevers in the Hippocratic corpus stood for. Biting, gentle, moist to touch, livid, dry, horrible to see and flatulent were the adjectives used to qualify a fever.⁵² The author of *Epidemics* VI had no intention of designating any species of fever by these specific adjectives. These were simply the words used to express the accidental features of a fever. Yet Galen substantialised these adjectives, making them identifiers of disease entities, and used them as what he deemed to be the proper divisions of fever. However, *Epidemics* VI was not intended as a work that put forward any coherent and systematic theory of fever. Rather, it was Galen's theory-laden eyes that forged *Epidemics* VI into being the foundation of his fever theory. This forging placed the earlier Hippocratic writing into a new Galenic context.

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⁵² Laënnec (1804) 25.

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GALEN'S COMMENTARY ON HIPPOCRATES'
*DE HUMORIBUS**

Ivan Garofalo

Summary

This paper deals with the fragments of the Galenic commentary on Hippocrates' De humoribus preserved in Oribasius, Rhazes, Maimonides, their philological history and a comparison of some passages.

The Hippocratic treatise *On Humours*¹ is one of the most difficult treatises in the collection, for it is in effect an aphoristic summa of Coan medicine. Galen considered it authentic, but at the same time too concise and too prolix.² His commentary on it is, it seems, an attempt to elicit from it the complete Hippocratic doctrine.³ Oribasius excerpted substantial sections from the commentary. Significant parts were inserted into a pseudo-Galenic tract, produced probably in the Alexandrian school: *On Sleep, Wakefulness and Exercises* (*De somno et vigilia et exercitiis*).⁴

Even for the ninth century scholar Hunain it was difficult to find a Greek manuscript of Galen's commentary on the Hippocratic *Humours*;

* I thank my friend Jeanne Clegg for trying to improve my English, and A. Roselli for her suggestions.

¹ *Peri chumôn / De humoribus*, henceforth *Hum*. See Littré, vol. 5 (1846) 470–475; Deichgräber (1972), Jouanna (1993) 241–242.

² Scholium in the ms Marcianus gr.269, f. 74r above the title: ΓΝΗΣΙΟΝ ΦΗΣΙΝ ΟΓΑΛΗΝΟΣ, in the margin: τοῦτό τινα εἰς βραχυλογίαν ἐσχάτην ἔχει ἐσφιγμένα, τινὰ δὲ ἐκτεταμένα ἀμμέτρου (read συμέτρου) μᾶλλον. Something similar in its apograph H, Par. 2142 (Littré V 476): Γνήσιον εἶναι τοῦτο Ἱπποκράτους φησὶν ὁ Γαληνός, πλὴν ἔστιν εὐρεῖν τινα μὲν εἰς βραχυλογίαν ἐσχάτην ἀφιγμένα (read ἐσφιγμένα), τινὰ δὲ ἐκτεταμένα συμέτρου πλέον. I thank C. De Stefani for communicating to me his reading of the ms.

³ *On Humours* has a rather eccentric theory of critical days (evacuations from above on odd days, from below on even days), and Galen, *pour cause*, does not quote it in his books on *Crises* and *Critical Days*.

⁴ The Arabic translation of this treatise has been edited as a doctoral thesis by Rainer Nabielek, who also published a paper on it. The passages quoted by Rhazes are certainly drawn from the Galenic commentary and not from Oribasius. See also Balielek (1982).

his Syriac translation was turned into Arabic by 'Isa Hunain's pupil,⁵ but neither the Greek nor the Oriental versions have survived.⁶

Like other lost Galenic works, the commentary on *Humours* was eagerly sought in the Renaissance, and finally, in 1560, Darmarius, inspired by Rasarius, composed the forgery preserved *i.a.* in the Parisinus Coislinianus 163.⁷ The Latin version of it, by Rasarius, was published in 1564. Chartier (1679) apparently distrusted it but Kühn published it (1828), with the Latin version by Rasarius. Although some scholars expressed doubts about its authenticity, it was only in 1918 that it was shown to be a forgery by the prospective editor of the commentary for the CMG, K. Kalbfleisch.

The first collection of fragments from the authentic commentary, extracted from the Latin version of Maimonides' *Aphorisms*, was printed in the *Juntina* of Galen in 1597 and reproduced by Chartier, with modifications, in Volume IX of his *Hippocratis et Galeni opera* (pp. 399–401).⁸

In his 1972 essay on the role of *On Humours* in ancient medicine, K. Deichgräber dedicated a chapter to Galen, and in particular to his lost commentary, presenting his brilliant discovery of the Greek fragments in Oribasius' *Collectiones medicae*. Deichgräber compared Oribasius with the Latin version of Maimonides' *Aphorisms* and demonstrated that the chapter on purgatives (7.22), as well as that on sneezing (8.11.6), derive from the Galenic commentary on *Humours*. He also suggested that the chapter on revulsion and derivation of humours in Oribasius (8.19) comes from the same commentary.

Deichgräber thought that most of the fragments (about thirty) were preserved by in Maimonides. In fact, as Manfred Ullmann⁹ and Gerrit Bos¹⁰ have observed, Maimonides' excerpts give a fairly clear idea of the nature of the commentary. Thanks to the kindness of Prof. Bos, I was able to make use of a provisional text, with an English translation, of the Arabic edition of *Aphorisms* he is preparing.¹¹

⁵ Hunain, Bergsträsser (1925), n°. 96.

⁶ The manuscript Meshed Tibb 80 (Sezgin (1970) 35) does not contain the Galenic commentary, as I could see with the help of Véronique Boudon, who possesses a microfilm of it.

⁷ Demont (1999) 183–184.

⁸ See Deichgräber (1956) 517–519.

⁹ Ullmann (1970).

¹⁰ See also Bos (2002).

¹¹ The fragments collected by Bos are fairly more numerous than those collected by the Juntina and Chartier.

Deichgräber knew, of course, that many fragments of the commentary are preserved in Rhazes, yet in a footnote (p. 40, n. 20) he states that he would not take Rhazes' work into consideration on this occasion but would do so in the future. Unfortunately this promise was not fulfilled, nor did Deichgräber publish a complete essay on Maimonides' fragments. The project for a complete collection of all fragments of the commentary, along the line of the collection by Baumgarten of *Peri phonês*,¹² was never realised.

In fact, the fragments preserved in Rhazes¹³ are much more numerous than those in Maimonides,¹⁴ and some are considerably longer; some of them adhere to the format of the commentary, with Hippocrates' lemma followed by Galen's explication. A good deal of fragments are shared by the two authors, without completely coinciding, because of their different way of excerpting. Maimonides' excerpts are usually fuller.

THE COMMENTARY ON *HUMOURS*

Galen recalls twice the occasion on which he composed his commentary on *De humoribus*. In the commentary on *Epidemics* III (written about 186),¹⁵ he writes: 'after this (the commentary on *De alimento*), I composed the explanations on *De humoribus*, in only a few days, because the man who asked me to make them was in a hurry to leave'.¹⁷ However, in *On My Own Books* (*De libris propriis*, published after 192)¹⁷

¹² Baumgarten (1964).

¹³ Many extracts, however, are doublets. E.g. 7.59.18 ≈ 9 7.114.14–15.

¹⁴ Sezgin (1970) 35 indicates only *Continens* 15.158; Ullmann (1970) 30 attributes several quotations in books 3 and 4 of the *Continens*, which come from the commentary of Galen, to the book of Hippocrates. The mistake arises from the fact that Rhazes refers to the commentary as the (first, second, third) book of *Humours*, as he usually does when quoting Galenic commentaries. See Garofalo (2002).

¹⁵ Bardong (1942) 639.

¹⁶ This could explain the low esteem in which Maimonides held the commentary (see the 'Introduction' to his *Commentary on Hippocrates' Aphorisms*). I owe this suggestion to G. Bos.

¹⁷ In *Hippocratis III Epidemiarum commentarii* 2, prooem. (17A.578,5 = CMG V 10.2.1, 61,17 ff. Wenkebach: μετὰ δὲ τοῦτο τοῦ Περί χυμῶν ἐξηγήσεις ἐποιεῖσάμην διὰ ταχέων ἐν ἡμέραις ὀλίγαις, ἐπειγομένου πρὸς ἀποδημίαν τοῦ παρακαλέσαντος αὐτὰς γράψαι. *Libr. Propr.* (19.35,8–13 K. = *SM* II, p. 112.18–23 Müller): μετὰ δὲ τοῦτο τοῦ Περί χυμῶν ἐξηγήσεις ἐποιεῖσάμην διὰ ταχέων ἐν ἡμέραις ὀλίγαις, ἐπειγομένου πρὸς ἀποδημίαν τοῦ παρακαλέσαντος αὐτὰς γράψαι.

the commentary on *Humours* is listed among those given to friends, ready for publication. This contradiction has been noticed by scholars;¹⁸ perhaps the original commentary was revised and enriched in the interval, as others certainly were. According to Bardong, it was composed about 177, after the composition of the first commentary on *Regimen in Acute Diseases*. A fragment in Rhazes (23.202.14) confirms this date, if Galen is there alluding to *On the Preservation of Health*: “the second book on humours: we showed in our books that spontaneous fatigue comes either from corruption of humours or from plethora in the body”. This topic is treated in book 4 of *On the Preservation of Health* (*De sanitate tuenda*). This treatise was written about 177.¹⁹

The commentary on *Humours*²⁰ was in three books, as Galen²¹ tells us in *On My Own Books*, and he himself quotes from the third.²² In the Arabic version of *Humours*, edited by Mattock, the Hippocratic treatise is divided into three books; we find the subscriptions to the end of each of the three books.²³ According to these subscriptions, the first book closed with the second paragraph of chapter 4 (ὕγραμός); the second book started with ἔρριψις and ended with chapter 7; and the third was a commentary on our chapters 8–20. This suggests that the Arabic version of the Hippocratic text has been constructed by unifying the lemmata of the commentary. *Humours* was not independently translated into Arabic, and in this respect it resembles other works commented upon by Galen, such as *Airs, Waters, Places, Regimen in Acute Diseases* or *Aphorisms*, the Arabic translations of which are clusters of lemmata. So we have the text of *Humours* as accepted by Galen. Its relation to the text of *Humours* has been studied by J.N. Mattock²⁴ and by Paul Demont.²⁵

¹⁸ Deichgräber (1972), Manetti-Roselli (1994) 1540.

¹⁹ Bardong (1942) 638 n. 2.

²⁰ Edition of reference Jones, Hippocrates vol. 4, who uses A and M but also quotes the spurious commentary.

²¹ *Libr. Propr.* (19.36.8 K = SM II, p. 113.18–19 Müller): εἰς δὲ τὸ περὶ χυμῶν ὑπομνήματά μοι τρία γέγονεν.

²² *In Hipp. Epid. VI Comm.*, 3.37 (17B.108,3 K = CMG V 10.2.2, 182.12–14 Wenkebach): φαγεδαίνας δ' ὅτι λέγει τὰ διαβιβρωσκόμενα τῶν ἐλκῶν, ἃ δὴ καὶ φαγεδαϊνικὰ καλοῦσιν οἱ παλαιοὶ τῶν ἱατρῶν, εἴρηται [δὲ] κἀν τῷ τρίτῳ τῶν εἰς τὸ Περὶ χυμῶν ὑπομνημάτων.

²³ See Mattock (1971) and Irmer-Anastassiou (1997).

²⁴ See apparatus.

²⁵ Demont (1999) 190 n. 20.

The first book of the commentary concerned a few pages of *Humours*, but these pages contain, in an aphoristic style, almost all the diagnostic and therapeutic topics of Hippocratism—without strict reference to the text, as Maimonides observed. Most of the excerpts in Rhazes and in Maimonides are drawn from the first book, but the third book is also well represented; few fragments come from the second.

Galen²⁶ quotes his own commentary several times: at *De tremore* 4 (7.591,18 K.) for the term *erripsis* ('prostration'; see below),²⁷ at *De methodo medendi* 4.6 (10.291,8 K.) for revulsion and derivation;²⁸ at *De crisis* 1.7 (9.577 K.), commenting on the need of wait for coction when evacuating. Then in his commentary on *Aphorisms* 1.20–23 (17B.436 K.), which are almost identical to *Humours* 6; in his commentary on *Epidemics* VI, 2–4.1, which contains a passage almost identical to *Humours* 20 (the final chapter), as well as an aphorism on revulsion and derivation which appears, with variations, at *Humours*²⁹—where, says Galen, it was commented on in full. Strangely enough, he does not quote *Humours* when commenting on *Aphorisms* 3.1–4, which appear almost word for word in *Humours*, chapters 15 and 16.

The only explicit reference to the commentary, apart from Galen's own, is in a scholium to Oribasius, a chapter, borrowed from Rufus,³⁰ on the swelling named *terminthos*, 'terebinth':

τάχα δὲ τέρμινθος ἐκλήθη διὰ τὸ ποικίλον τῆς χροιάς, ὅτι καὶ ὁ καρπὸς τῆς τερμίνθου ποικίλος, εἴ γε ἡ μὲν φλύκταινα μέλαινα, τὸ δὲ τῷ ἀποσύρματι ἐοικὸς ἐνερευθές, καὶ τὸ πύον ἡκυχῇ λευκόν.

schol. R²: οὕτω καὶ ὁ Γαληνὸς βούλεται ἐν τῷ Περὶ χυμῶν Ἰπποκράτους, τμήμα γ'. (on *Hum.* 20).

Oribasius, *Collectiones medicae* 44.15 (CMG III 132.20–31 Raeder)

Galen shared Rufus' opinion that the name *terminthos* comes from the similarity of this excrescence to the fruit of the *terminthos*; and

²⁶ Irmer–Anastassiou (1997).

²⁷ At his *In Hipp. Epid. VI Comm.*, 1.15, he read ῥίψει, not ἔρριψι, as do the mss. M and V and the editors Manetti and Roselli (1981) 18.

²⁸ τοῦτου δ' αὐτοῦ πάλιν ἡμᾶς τὸν διορισμὸν ἐν τῷ περὶ χυμῶν ἐδίδαξεν, ἀντικαθ' ἑαυτὸν μὲν κελεύει εἰς τὰ πάντα, παροχετεύειν δ' εἰς τὰ πλάγια.

²⁹ *In Hipp. Epid. VI Comm.* 2.7 (17A.905,1 K = CMG V 10.2.2 = 64.14–17 Wenkebach): Παροχετεύειν Τρόπους θεραπείων ἐπὶ χυμοῖς ἐνταῦθα διδάσκειν ἄρχεται, γεγραμμένους τελειότερον ἐν τῷ Περὶ τῶν χυμῶν, εἰρήκονται δὲ καὶ νῦν ἀναμνήσεως ἕνεκα.

³⁰ Daremberg does not include it in his collection of fragments, but it comes after ch. 14 from Rufus' *Peri tōn ekstos pathōn*, as ch. 18 (see scholiast at both passages), and the style and the authorities quoted are the same as in ch. 18.

similarly in the commentary on the parallel passage of *Epidemics* VI 3.23 (5.304 L.),³¹ and in the *Glossarium* (19.145,12 K).³²

RHAZES

Rhazes,³³ the great physician who died in 923 or 925 and who was in a position to use all the translations of the school of Hunain, has preserved about a hundred fragments, distributed in nearly all books of the *Continens* according to the division in the Hyderabad edition.³⁴ The longest are from book 4 on pleuritis, book 6 on evacuations, book 16 on crises and book 23A on sleeping, vomiting etc.³⁵

The spurious commentary by Darmarius, which includes the extracts from the Latin Maimonides translated into Greek, has none of the quotations preserved by Rhazes, even though the Latin translation of the *Continens* by Faragut (printed in Brescia, 1489 and later) was accessible to him.

Since Rhazes and Maimonides³⁶ quote passages of a medical or physiological nature, testimonies on linguistic matters are rare. They can be summarised as follows:

(1) The distinction between *chymos* and *chylos*, certainly in the Prooemium:

Maimonides <i>Aph.</i> 23.5: Chymos is a liquid that is found in the body of living being and chylos is that which is found in fruits when they	Maimonides Fr. 79 Chartier: ex prima humorum. Chymus est humiditas quae reperitur in corpore animalis et chylus est humiditas quae reperitur in
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³¹ 17B.108 K. (= CMG V 10.2.2 = 183.4–7 Wenkebach): καὶ τὸ τῶν τερμίνθων (τερμινέων U corr. Ald.) δ' ὄνομα μελάνων τινῶν ἐκφυμάτων ἐν ταῖς κνήμαις μάλιστα γινομένων ἐστὶ δηλωτικὸν ἀπὸ τῆς κατὰ σχῆμα καὶ χροάν καὶ μέγεθος ὁμοιότητος τῷ καρπῷ τῶν τερμίνθων γεγονός. See Manetti–Roselli (1982) 74–75. In fact the word οὔτε τερμίνθοις has disappeared in the direct tradition of Hippocrates and is preserved by the Galenic commentary.

³² τέρμινθοι: οἱ τῷ τοῦ τερμίνθου καρπῷ παραπλήσιοι, κατὰ τὸ δέρμα συντετάμενοι παρὰ φύσιν ὄγκοι. The spurious commentary by Darmarius (XVI 461 K) gives a fanciful explanation of the term.

³³ On Rhazes see Sezgin (1970) 274–294 and Ullmann (1970) 128–136.

³⁴ This is not a critical edition; see Ullmann (1994) 1300–1302. It can be supplemented by the Latin version of Faragut (1266), first printed at Brescia in 1486. I have used the Venetian edition of 1529, preserved in the Biblioteca comunale of Siena, for the help and support of which I am most grateful.

³⁵ For the Greek sources of Rhazes see I. Garofalo (2002).

³⁶ The translations from the Arabic Maimonides are by G. Bos, with modifications.

are eaten or squeezed. In his explanation of the first book of *Humours*.

fructibus cum comeduntur, vel constringuntur.

(2) The discussion of terms such as:

(a) ἄμωτις 'ebb', of the first line of *Humours* (5.476,1 L.):

Maimonides *Aph.* 6.22: Some physicians are mistaken and think that the blood has increased in the body while it has not increased. Rather, because of the heat of the air or anger or fever something happens to it similar to the high tide in the sea (= πλημυρίς). And they sometimes think that blood has diminished while it has not diminished. Rather because of the cold which pushes the blood inwards something happens to it which is similar to the low tide of the sea (= ἄμωτις). In the first book of his explanation of *Humours*.

Maimonides Fr. 60 Chartier: ex prima expositione humorum. Inclinatorum aliquis medicorum et putat sanguinem superabundare in corpore et non superabundat et hoc accidit ex caliditate aeris aut ira aut febre quemadmodum accidit in mari dilatato et ipsum putat esse diminutum et non diminutus est sed hoc accidit ex frigiditate ipsum ad interiora impellente, sicut mari accidit fluctuanti.

(b) τρόφος 'tormentum' (5.480,6 L.):

Rhazes 8.76.4 *Humours*:

tormentum in the language of the Greeks means irritation of the bowels without evacuation.

(c) ἔρριψις prostration (5.480,9 L.):

The interpretation preserved by Rhazes coincides with the one given by Galen in his tract *De tremore*, where he quotes *Humours*:³⁷

Trem. 4 (7.591,18 K.): τὸ δὲ μὴ κατακεῖσθαι δύνασθαι ζῶντος τρόπον, ἀλλὰ κἀνταῦθα καθάπερ νεκρὸν καὶ ἄψυχον σῶμα καταφέρεισθαι, κακῶν ἔσχατον. τοῦτο ἐν τῷ περὶ χυμῶν ἔρριψιν ἐκάλεσεν, ὅπερ οἱ ἐξηγητάμενοι τὸ σύγγραμμα μὴ νοήσαντες ἐλάλησαν πολλά. τὸ γὰρ καταβεβληθῆαι δίκην ἀψύχου σώματος, παντὸς τοῦ τόνου τελείως ἐκλελυμένου τε καὶ ἀπολλώτοτος ἔρριψιν εἶπεν, ὥστε μὴ ταῦτόν

Rhazes 16.238.11: The third (*lege* second) of *Humours*, he said. Prostration is weakness of the faculty of the nerves and the muscles in an illness,³⁸ so that the person lies on his back or on his face or on his flank without moving or moving with pain and violence.

³⁷ Translations from Arabic into English as literal as possible.

³⁸ Omitted in ms N.

εἶναι τὸ ἐρρίφθαι τῷ κατακεῖσθαι, ἀλλ'
ὄν ἔχει λόγον τὸ καταπίπτειν πρὸς τὸ
κατακεῖσθαι. οὕτω καὶ τῶν ὀρνίθων
ἕτερον μὲν ἐστὶν ἐπὶ γῆν καταπτῆναι,
ἕτερον δὲ πεσεῖν ἐπὶ τὴν γῆν. τὸ μὲν γὰρ
ἐνέργεια, τὸ δὲ πάθος. ὡσαύτως οὖν
τούτοις ἐνέργεια μὲν ἡ κατάκλις ἐστὶ,
πάθημα δὲ ἡ ἐρριψις.

THE COMMENTARY ON *HUMOURS* IN ORIBASIOS

The comparison of many passages in Oribasius with parallels in Rhazes confirms Deichgräber's brilliant discovery (see *supra*) that Oribasius extracted from Galen's commentary the passages concerning sleep, sneezing and vomit, in books 6, 7 and 8 of his *Collectiones*—books dealing with general matters of hygiene. This comparison shows the freedom typically taken by Oribasius in omissions and slight variations, and similar behaviour in Rhazes. (Rhazes omits the name of Timocrates.)³⁹

(1) revulsion

ἐπὶ τοῖσιν ἄνω, κάτω, ἄνω, ἐπὶ τοῖσι κάτω· (5.477,12 L. = p. 64 Jones):

Or. *Coll.* 8.19.5 = CMG VI 1.1, 266.7 Raeder:
καὶ ἀπλῶς τὴν ἀντίπασιν
ποιητέον ἐπὶ μὲν τοῖς ἄνω
ρέπουσι χυμοῖς εἰς τὰ κάτω,
ἐπὶ δὲ τοῖς εἰς τὰ κάτω
τοῦναντίον, καὶ ἐπὶ μὲν
ταῖς εἴω ῥοπαῖς ἔξω, καὶ
πάλιν ἐπὶ ταῖς ἐκτὸς εἴω,
κἂν εἰ πρὸς τὰ δεξιὰ ῥέποι,
τὴν ἐπ' ἀριστερὰ ποιητέον
ἀντίπασιν, κἂν εἰ πρὸς
ἀριστερά, τὴν ἐπὶ τάναν-
τία. οὕτως μὲν καὶ τὰς μὲν
ὀπίσω ῥοπαῖς ἀντιπᾶν

Rhazes 6.7.6: Hippo-
crates: when it tends
upwards, down, and vice
versa. G(alen). Traction
must be in the opposite
direction: draw what
tends upwards, down-
wards and vice versa,
and what tends to the
right, to the left, and
what tends inward, out-
ward and what tends
forwards, to the rear, as
we draw matter from
the eye with the cup-

Continens 115rB: § Dixit
ypocras quod si decli-
nans fuerit ad inferius
attrahatur ad exterius
sed quod ad anterius
attrahatur ad posterius,
quod ad dextrorsum
attrahatur ad sinistror-
sum, quod ad interius
attrahitur ad exterius,
sed attractio de parte
anteriori ad partem pos-
teriorem fit sicut attrahi-
tur materia oculorum
per ventosam appositam

³⁹ Timocrates may be, perhaps, the author of the recipe in Galen, *De compositione medicamentorum secundum locos*, 5.5 12.887,1 K, as Deichgräber suggests.

πρόσω, τὰ δὲ πρόσω
ρέποντα ρεύματα πρὸς τὴν
ὀπίσω χώραν ἀπάγειν.

Τιμοκράτης γοῦν ὁ
Ἡρακλεώτης, ἐξ ἀγροῦ
νεανίσκου κομίσαντος εἰς
τὴν πόλιν οὐ μικρόν τι
βάρος ἐν τῇ δεξιᾷ χειρί,
καὶ ἐμπρηθείης αὐτῆς,
ἐκέλευε τὸ ἴσον βάρος εἰς
τὴν ἀριστερὰν χεῖρα μετα-
λαβόντα τὴν ἴσην ὁδὸν
ἀνῦσαι μετ' αὐτοῦ καὶ τὴν
ρηνματιθεῖσαν ἀναδησαι
χεῖρα, καὶ τούτου γενομέ-
νου κατέστη παραχρῆμα τὸ
οἴδημα τῆς δεξιᾶς χειρός.
κάμει δ' ὁρᾷτε πολλάκις
οὐκ ἐπὶ τῶν χειρῶν μόνον,
ἀλλὰ καὶ ἐπὶ τῶν σκελῶν
ποιοῦντα τὸ παραπλήσιον
τούτῳ· τῷ μὲν γὰρ ρευμα-
τιθέντι σκέλει τῶν ἀποκ-
ρουστικῶν τι φαρμάκων
ἐπιτίθῃμι μετὰ τῆς προση-
κούσης ἐπιδέσεως, ἥτις ἄρ-
χεται ἐκ τῶν κάτω μερῶν,
αἰεὶ δὲ κατὰ τὸ συνεχὲς
ἐπινεμομένη πυκνῶς τὰ
πέλας χωρία μέχρι βουβῶ-
νος ἀνέρχεται· τῷ δ' ἑτέρῳ
σκέλει τῶν θερμαινόντων
τι φαρμάκων ἐπιτίθῃμι,
μεταλαμβάνων τε καὶ
ἀντιπῶν ἐπ' ἐκείνο τὸ
ρεῦμα.⁴⁰

ping-glass on the nape
of the neck⁴¹ and cut⁴²
the vein on the front be-
cause of pain in the nape
of the neck.

6.7.10: He said: a
youth brought a weight
on his arm, and his arm
got inflamed and the
doctor prescribed him
to bring that weight with
the other arm and to
bring it for a long dis-
tance, and that swelling
ceased immediately.

He said: I do the
same, and concern my-
self with the sick leg and
tie it from above down-
wards and apply on the
healthy one warming
drugs so as to draw mat-
ter to the other leg.

conculc occipitii et
aperitur vena in fronte
ad dolorem partis pos-
terioris colli. § Dixit
quod quidam infans por-
tando quoddam onus
ponderosum per manus
passus est inflationem
manus ipsius, qui de
mandato medici por-
tando illud onus ponde-
rosus per aliam manum
spacio similis vie qua
portaverat illud onus per
manum inflatam miti-
gata fuit inflatio eius sta-
tim. § Dixit quod ego
feci similiter in ipso modo
et inveniando pedem
dolentem cum fascia
ligavi pedem ab inferiori
parte eius usque ad supe-
riorem superponendo
pedi sano medicinas
calefactivas ad attrahen-
dum materiam de alio.

⁴⁰ τοῦ ρεύματος (mss and editors).

⁴¹ Maimonides 12.43: 'Sometimes apply cupping glasses to the hollow in the back of the neck to attract the matter which flows to the eyes <in the opposite direction>, and bleed from the frontal vein to attract the matter which is in the posterior part of the head. In the first of *Humours*' (translation by G. Bos).

⁴² γφρ for γηρ.

(2) Evacuations:⁴³

Or. *Coll.* 7.22.21, CMG VI 1.1, 223.15 Raeder: καὶ μὴν καὶ τὸ ἔθος οὐ μικρὰ μοῖρα πρὸς ἔνδειξιν κενώσεως· οἱ μὲν γὰρ ἐμεῖν εἰθισμένοι φέρουσιν ἀλγυπότερον τὰς διὰ τῆς ἄνω κοιλίας καθάρσεις· οἱ δ' ἄθεις οὐκ ἄνευ κινδύνου, καὶ μᾶλλον ἐπ' ἐλλεβόρου. καὶ τὸ τοῦ νοσήματος δ' εἶδος σκοπεῖσθαι προσήκεν. 7.23.17 CMG I 1,1 p. 223,3 οἱ δὲ στενὸν ἔχοντες τὸν θώρακα καὶ διὰ τοῦτο καὶ τὸν πνεύμονα συντεθλιμμένον ἀνεπιτηδεϊότατοι τυγχάνουσιν εἰς τὰς ἐμετικῶν φαρμάκων καθάρσεις τὰς τε ἄλλας καὶ μάλιστα τὴν δι' ἐλλεβόρου τοῦ λευκοῦ· ῥήγνυται γὰρ αὐτοῖς ἀγγεῖόν τι τῶν ἐν τοῖς ἀναπνευστικοῖς ὀργάνοις.

Rhazes 6.2.6–12: From the first book of *Humours*, he said: if one is accustomed to vomit, this is easier for him and he can evacuate his body more than others can, and for those who are not accustomed to this using it is dangerous, specially with hellebore, and the persons most damaged by vomiting are the ones with narrow breasts; vomit is in fact harder for them than for any other people, and they are predisposed to phthisis, and when they vomit with hellebore the veins in their respiratory organs mostly break and therefore this must be avoided specially in these people, and people with broad breasts tolerate it and it is easier and safer for them.

Continens 6.1 249A: Dixit in primo capitulo libri humorum quod qui consueverit vomere levior ei erit vomitus et possibile erit ei evacuare corpus per vomitum absque horribilitate: tamen qui non conueverit eo uti fallax erit eius operatio et proprie cum elleboro; habentes quoque pectora stricta vehementius nocumentum patiuntur in vomitu cum difficilior fuerit vomitus eis quam aliis cum forte apti fuerint ad ptisim. Unde si vomuerint cum elleboro rumpentur in eis vene in instrumentis anhelitus in maiori parte. Ideo vomitus cavendus est in hiis proprie. Sed habentes pectora larga magis sustinent vomitum cum levior sit eis et securior in eis.

(3) Vomits:

Or. *Coll.* 8.20.5, CMG VI 1.1, 266.26 Raeder: Ἐκ τῶν Γαληνοῦ· περὶ ἐμέτου.

Τοῖς ἐθάαι τῶν ἐμέτων ἐνίοτε μὲν συμφέρει πρό- κάγειν, ἐνίοτε δ' ἀπάγειν

Rhazes 5.37.1 (the first of *Humours*): When yellow or black bile flows into the stomach and food gets corrupted in it, and if the region is hot and the regimen is toil-

Continens 97rA: Dixit G. quod si colera rubea aut nigra fluens fuerit ad stomachum et inde cibarium fuerit corruptum et regio fuerit calida cura erit fastidiosa et

⁴³ Cf. the spurious commentary, 16.124–125 K.

τε καὶ ἀπεθίζειν. εἰ μὲν οὖν εἰς τὴν κοιλίαν κυρρέοι ξανθὴ χολή, πικροχόλου τε ὄντος τοῦ ἀνθρώπου καὶ χωρίον οἰκοῦντος θερμὸν ἔν τε πόνοις καὶ φροντίσι διαιτουμένου, προσεθίζειν χρὴ τὴν χολὴν ἐμῖν πρὶν προκαίρεσθαι τροφήν.

εἰ δὲ διὰ τὸ πλέον ἐθέλειν οἴνου πίνειν ἐπὶ τοῖς λουτροῖς πρὸ τῶν κιτῶν, ἀπάγειν τοῦ κατὰ τὸν ἔμετον ἔθους ὅμα τῷ καὶ τοῦ πλήθους ἀφαιρεῖν τῶν τε κιτῶν καὶ ποτῶν. ἀσθενὴς γὰρ ἡ κοιλία γινομένη τούτων ἐθίζεται δέχεσθαι τὰς ἐξ ὅλου τοῦ σώματος περιουσίας εἰς αὐτὴν κυρρεούσας κατὰ καιροῦς δὲ τινὰς ἐμῖν συμφέρει χάριν τοῦ χυμὸν γλίχχρον καὶ πλεῖστον ἀπορρίψαι τῆς γαστροῦς, ἡνίκα ῥαφανίδας τε δι' ὀξύμέλιτος (. . .)

καὶ τοῖς ἑξῶθεν ἐπιτιθεμένοις φαρμάκοις ῥωννύντες αὐτήν.

some,⁴⁴ accustom him to vomiting before food so that the bile be cleaned, and if he is accustomed to that when he eats and fills himself with food and drink stop this habit of his by reducing his food and wine; their bellies are feeble indeed and ready and accustomed to matters flowing in them, and for those in whose stomach viscous phlegm collects vomiting with radishes and oxymel at fixed periods is beneficial and (some corrupted words) . . .

and put upon his stomach cataplasms with fortifying matter lest he should get feeble because of the evacuation by vomiting.

difficilis.⁴⁵ Unde utendum erit vomitu ante assumptionem cibi ut mundificari valeat de ipsa colera. § Quod si patiens usualiter post repletionem cibarii et potus evomuerit corrigenda est illa consuetudo diminuendo cibum et potum cum inde stomachus debilitetur et aptus fiat ad recipiendum reumata discurrantia ad eum; quod si coadunatum fuerit in stomacho flegma viscosum insistendum est vomitu cum radicibus et syrupo acetoso.

frequenter quoque cura debet fieri cum emplastro apponendo stomacho cum rebus confortantibus eum ne ex usu vomitus debilitetur.

Two more chapters of book 8 of the *Collectiones*, 9 on exercises and 12 on the times of exercising, may also have been lifted from the commentary.

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⁴⁴ Emending *n'm* in *ta'abijyan* (πόνους).

⁴⁵ Faragut has misunderstood the Arabic.

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AUTOUR DE LA CONNAISSANCE DU TRAITÉ
HIPPOCRATIQUE *DES HÉMORROÏDES*
À L'ÉPOQUE BYZANTINE

Alessia Guardasole

Summary

In two manuscripts of Galen's De compositione medicamentorum secundum locos, the Marcianus gr. V 7 and the Vaticanus Reginensis gr. 172, Galen's text is interrupted by a brief anthology about aetiology and therapy of prolapses, haemorrhoids and anal inflammations. Both manuscripts present a chapter, titled αἰτίαι αἰμορροΐδων, which consists of chapters 1–2 (p. 146, 2–12 Joly) of the Hippocratic On Haemorrhoids. My contribution presents this new document about the knowledge of this Hippocratic work, neglected by modern scholars, but well known by Byzantine medical writers.

Robert Joly, dans son édition de 1978 des traités *Des hémorroïdes* (*De haemorrhoidibus*) et *Des fistules* (*De fistulis*), avait déjà souligné la nécessité et l'importance d'une étude détaillée sur le rôle de prééminence du *Des hémorroïdes* dans la tradition médicale ancienne.¹ Ensuite, dans sa communication présentée à Pise en 1997 dans le cadre du IX^e Colloque Hippocratique, Anna Maria Ieraci Bio avait identifié un remède hippocratique (*Haem.* 7, 6.442 L.) contre les hémorroïdes, repris dans le quatorzième livre, encore inédit, de l'encyclopédie médicale d'Aétius d'Amide.² Elle avait aussi très bien documenté l'utilisation directe du texte d'Hippocrate, ainsi que sa révision, de la part d'Aétios, en soulignant le rôle central du traité *Des hémorroïdes* face au texte "canonique" des *Aphorismes* 6.12, traitant du même sujet. Les résultats de notre enquête sont tout à fait comparables à ceux de Madame Ieraci Bio.

Lors de la collation des manuscrits Marcianus Graecus V 7 (= M) et Vaticanus Reginensis gr. 172 (= R) (datant tous les deux du quatorzième siècle),³ finalisée à l'édition du traité de Galien *Sur la*

¹ Joly (1978) 135.

² Ieraci Bio (1999) 458–463.

³ Pour la description de ces deux manuscrits, cf. Guardasole (1997) 45–47.

composition des médicaments d'après les lieux affectés (*De compositione medicamentorum secundum locos*), j'ai remarqué que ces deux manuscrits omettent un long passage, traitant des remèdes contre l'hydropisie et les coliques, du texte de Galien.⁴

Dans les deux témoins une anthologie sur les différentes pathologies dysentériques est insérée au même point du texte de Galien; on y trouve des fragments inconnus ailleurs des *Collections médicales* (*Collectiones medicae*) d'Oribase.⁵ A la suite de cette première insertion, le texte des manuscrits correspond aux pages 288,8–314,12 de l'édition de Kühn—même si par ailleurs on peut noter que dans M les *Compositions* de Galien sont interrompues à nouveau par l'insertion d'autres remèdes contre les mêmes pathologies.⁶

Au chapitre des *Compositions* galéniques 9.7 (13.314,12 K.), traitant des pathologies anales, on voit apparaître aussi bien dans M, fol. 111^v, 1, 35, que dans R, fol. 224^r, un autre fragment d'Oribase (Ὅρειθασίου), qui introduit une anthologie sur les pathologies anales, présentant exactement la même structure que l'anthologie précédente. Les quatre premiers remèdes sont tirés de manière évidente de Galien, même si Oribase en a sans doute été la source intermédiaire;⁷ en revanche, pour le reste de l'anthologie, je n'ai pas encore trouvé de correspondance littérale dans les traités connus de médecine et pharmacologie anciennes.⁸

⁴ La partie de texte omise correspond aux pages 266, 8–288, 6 du tome XIII de l'édition de Kühn.

⁵ Cf. Guardasole (2003) 177–196.

⁶ Sur la structure très mélangée du manuscrit M, cf. Sonderkamp (1987) 215–228; Guardasole (1997) 46 sq.

⁷ Cf. Guardasole (2003) 181 sq.

⁸ Ms. Marcianus Graecus V, 7 (coll. 1054), fol. 111^v, 1, 35; Vaticanus Reginensis 172, fol. 224^r; cf. Guardasole (2003) 191: ἀπὸ δὲ Ὅρειθασίου. πρὸς τὰς ἐν ἔδρᾳ φλεγμονὰς καὶ προπτώσεις. κηκίδα τὴν ξανθὴν ἐνήσας καὶ λειώσας, κατάπλασσε ισχυροτέρῳ μὲν οἴνῳ, πραοτέρῳ δὲ ὕδατι. καὶ ὁ χυλὸς τῆς σχίνου ποιεῖ πρὸς φλεγμονὰς καὶ προπτώσεις τῆς ἔδρας. ἄλλο· πίτυος φλοιοῦ < η', κυπαρίσσου σφαιρίων ξηρῶν < β', προαπονίψας οἴνῳ στρυφνῷ λείους κατάπλασσε. ἄλλο πρὸς δὲ τὰς πυρῶδεις ὁδύνας τῆς ἔδρας· ὧσ' ὅπου λέκιθον λειώσας οἴνῳ λευκῷ καὶ ροδίνῃ κηρωτῇ ἀναλαβὼν διάχριε. πρὸς δὲ τοὺς κνησμούς, γῆν Κιμωλίαν λειώσας ἀναλάμβανε κηρωτῇ μυρσίῃ καὶ χρῶ. πρὸς δὲ τὰς ἐν δακτυλίῳ καὶ αἰδοίῳ ραγάδας· σποδοῦ, ξυσμάτων ὀθονίων κεκαυμένων καὶ ἀμύλου ἴσον λεάνας καὶ ἐλαίας φύλλων χυλὸν μίξας, κατάχριε. τροχίσκος πρὸς ἐξοχὰς· ἀλόης, κρόκου, σμύρνας, ἀνὰ οὐγγ. α', στυπτηρίας οὐγγ. β'. λείου οἴνῳ ἀμιναιῷ καὶ χρῶ. ἄλλο. πνίνον καύσας καὶ ὡς ξηρίον ποιήσας, οἴνῳ πρότερον ἀποβρέξας πλάττε. ἄλλο. σεύτλων φύλλα λειώσας καὶ χάρτην καύσας καὶ μέλιτος κοχλιάρια β' βαλὼν, ἔκλυσον καὶ ποιήσας ἐμπλαστρον ἐπιτίθει. ἄλλο· βλάχνου τὴν βοτάνην καύσας μετὰ ἀσκάλωνος. πρὸς πᾶσαν φλεγμονὴν κατὰ τε αἰμορροΐσιν καὶ δακτύλιον πινόμενον καὶ πυριαζόμενον, παραχρήμα ὠφελοῦν δεδοκίμασται. καὶ ἀποδέδεικται παμπόλλοις εὐδόκιμον. τοῦ

Le vocabulaire (par exemple, l'emploi de πανίον, πυριάζω), ainsi que l'utilisation de quelques ingrédients, p.e. l'ἀμανίτη⁹ contre toute forme d'inflammation anale et d'hémorroïdes, suggèrent une datation assez tardive.

C'est justement dans cette section que l'importance encore consacrée aux textes hippocratiques à l'époque byzantine ressort de manière claire. Après la recette très détaillée (cf. note 8) nous renseignant sur l'emploi du remède à base d'amanite contre les inflammations et les hémorroïdes, suit la section dont le titre est αἰτία αἰμορροΐδων, «étiologie des hémorroïdes». Il ne s'agit de rien d'autre que du premier chapitre et d'une partie du deuxième chapitre du traité hippocratique *Des hémorroïdes*. En voici le texte:

Hipp., *haem.* 1–2 (146,2–12 Joly = 6.436,2–12 L.)

αἰτία αἰμορροΐδων· αἰμορροΐδες γίνονται ὅταν χολὴ ἢ φλέγμα εἰς τὰς φλέβας τὰς ἐν τῷ ἀρχῷ καταστηρίξῃ, θερμάνῃ τὸ αἷμα τὸ ἐν τοῖς φλεβίοις· θερμαίνον δέ, ἐπισπᾶται ἐκ τῶν ἐγγυτάτῳ φλεβῶν τὸ αἷμα, καὶ ἀναπληρούμενα ἐξογκοῖ τὸ ἐντὸς τοῦ ἀρχοῦ καὶ ὑπερέχουσιν αἱ κεφαλαὶ τῶν φλεβῶν. καὶ ἅμα μὲν ὑπὸ τῆς κόπρου ἐξιούσης θλώμεναι, ἅμα δὲ ὑπὸ τοῦ αἵματος ἀθροιζομένου βιαζόμεναι, ἐξακοντίζουσιν αἷμα μάλιστα σὺν τῷ ἀποπάτῳ, ἐνίοτε δὲ καὶ χωρὶς τοῦ ἀποπάτου. Θεραπεύειν δὲ χρὴ πρῶτον.

αἰμορροΐδων τὸ μὲν νόσημα ὧδε γίνεται· ἐπὶ χολὴ ἢ φλέγμα εἰς τὰς φλέβας τὰς ἐν τῷ ἀρχῷ καταστηρίξῃ, θερμαίνει τὸ αἷμα τὸ ἐν τοῖσι φλεβίοισι· θερμαίνόμενα δὲ τὰ φλέβια ἐπισπᾶται ἐκ τῶν ἐγγιστα φλεβίων τὸ αἷμα, καὶ πληρούμενα ἐξογκοῖ τὸ ἐντὸς τοῦ ἀρχοῦ, καὶ ὑπερίσχουσιν αἱ κεφαλαὶ τῶν φλεβίων, καὶ ἅμα μὲν ὑπὸ τῆς κόπρου ἐξιούσης φλώμεναι, ἅμα δὲ ὑπὸ τοῦ αἵματος ἀθροιζομένου βιαζόμεναι, ἐξακοντίζουσιν αἷμα, μάλιστα μὲν σὺν τῷ ἀποπάτῳ, ἐνίοτε δὲ καὶ χωρὶς τοῦ ἀποπάτου. [2] Θεραπεύειν δὲ δεῖ ὧδε· πρῶτον μὲν κτλ.

σύμβωτος· πόλιον δεσμίδιον σὺν ἀμανίτῃ μετ' οἴνου ἀποτριτώσας, δίδου πίνειν ποτήριον. τὸ δὲ ἐναπομείναν εἰς τὸ χυτρίδιον πάνυ θερμάνας ὡς ἱκανὸν πυριάζειν, λαμβάνων τὸν ἀμανίτην, πυρία μετ' αὐτοῦ ὅσάκις σοι δόξῃ καλῶς ἔχειν. εἰς δὲ ἔστω ὁ ἀμανίτης μέγας, ἢ δύο μετριώτεροι καὶ τὸν ζῶμον δὲ σπύγγῳ καινῷ λαμβάνων πυριάζε. τὸ αὐτὸ γὰρ ποιεῖ. τὸν δὲ ποτὸν τρεῖς πρωΐας πινέτω. ἢ δὲ πυρία καὶ τρεῖς εἰ θελήσειας τὴν ἡμέραν.

⁹ Cf. Savvinidou (2002) 55, 17–20 εἰς φλεγμαίνουσαν ἔδραν μαινίδος ἢ κεφαλῇ κεκαυμένη λεία σὺν μέλιτι ἀναλαμβανομένη καὶ τῷ δακτύλῳ ἐπιχριομένη· μύκης [BC: ἀμανίτη VF] σὺν ὕδατι ἐψόμενος καὶ λείος ἀναλαμβανόμενος σὺν βουτύρῳ ἐπιχρίομενος κέγχρου πίτυρον σεσησμένον προκαταντήσας τὸν τόπον οἶνω ἐπίασσε.

2. γίνονται R: γάρ ἐστιν M 2-3. 8. ἐξογκεῖ (-έει) IR ἐξοιδέει ἐς
 εἰς τὰς φλέβας τὰς R: ἐκ τῶν Littré
 φλεβῶν τῶν M 3-4. καταστηρίξη
 scripsi: καταστηρίξαν M
 κατασχεθῇ R

Je voudrais commencer par une analyse strictement structurale de cette dernière insertion dans le texte de Galien; car si l'on considère la structure de toutes les sections de remèdes présentes dans notre anthologie, on trouve qu'elles présentent de manière commune: au début, une brève présentation de la maladie, où sont traités les aspects pathologiques et étiologiques, ainsi que la symptomatologie; puis, une série de recettes, constituant la partie thérapeutique.

Dans les deux autres fragments sur l'hydropisie et les pathologies dysentériques, l'étiologie est toujours reprise des *Collections médicales* d'Oribase; par contre, dans ce troisième cas l'auteur de ces recueils d'anthologie fait directement référence à l'*auctoritas* d'Hippocrate—même si dans aucun des deux manuscrits n'est mentionné le nom du père de la médecine.

De l'analyse du texte et de sa comparaison avec celui du traité hippocratique résultent les observations suivantes: 1) le verbe καταστηρίζω (καταστηρίξη dans Hippocrate, καταστηρίξαν dans M), qui est très présent dans les dits "traités Cnidiens",¹⁰ a été retenu dans M, alors que dans R il a été remplacé par le plus courant κατέχω (κατασχεθῇ); 2) le θερμαινόμενα, à la ligne 5, a été l'objet d'une fausse appréciation de lecture dans son abréviation et il est devenu θερμαῖνον, se référant à αἷμα et entraînant l'omission du sujet τὰ φλέβια; 3) le verbe ἐξογκεῖ, ligne 8, a été changé en -οῖ dans les deux manuscrits; 4) le début du deuxième chapitre, qui dans le traité hippocratique introduit la présentation de la thérapeutique, a été résumé en θεραπεύειν δὲ χρὴ πρῶτον, "avant toute autre chose, il faut soigner".

Partant, du point de vue du texte, la contribution de cette citation hippocratique est évidemment négligeable; néanmoins, si l'on se réfère à l'histoire du texte d'Hippocrate, ladite citation est beaucoup plus intéressante, puisqu'il est fort vraisemblable qu'elle fut empruntée directement à l'ouvrage hippocratique, sans l'intermédiaire d'aucune source, notamment de Galien.

¹⁰ Cf. Jouanna (1974) 294, n. 1.

En fait, dans les traités médicaux anciens conservés jusqu'à notre époque, en particulier dans le Corpus galénique, ce passage n'est nullement cité, même si pour Galien la question n'est pas tout à fait résolue.

Dans son *Commentaire aux Aphorismes d'Hippocrate* (*In Hippocratis Aphorismos commentarii*), 3.30 (17B.647,8 sq. K.), Galien résume manifestement la doctrine hippocratique sur l'étiologie des hémorroïdes en employant les mots suivants:¹¹ "les hémorroïdes sont en réalité une maladie propre à cet âge, ainsi que les mélancolies. Car elles sont causées par la bile noire, à chaque fois qu'elle se reverse en quantité trop excessive dans les vaisseaux de l'anus". De même, dans son *Commentaire aux Epidémies VI* (*In Hippocratis librum VI Epidemiarum commentarii*), 5.25, lorsqu'il traite de la couleur sombre du sang qui coule souvent des hémorroïdes, le médecin de Pergame écrit:¹² "les hémorroïdes ne sont pas provoquées par une seule cause, mais tantôt c'est la nature même qui les engendre lorsqu'elle se purifie de l'humeur mélancolique, tantôt lorsque la nature évacue l'excès de la même humeur, comme dans les cas des malades qui sont atteints d'épistaxis; tantôt les hémorroïdes se produisent lorsqu'un vaisseau a été violemment dilaté par le sang qui s'y est reversé, sans que la nature intervienne avec prévoyance." Un troisième passage galénique, qui d'ailleurs est le plus intéressant dans notre enquête, est tiré du traité *Sur l'incision des veines contre Erasistrate* (*De venae sectione adversus Erasistratum*); lorsqu'il considère la dette des médecins, dont Dioclès Praxagore et Hérophile, envers Hippocrate en ce qui concerne leurs doctrines sur l'incision des veines, Galien écrit:¹³ "seuls les médecins

¹¹ Gal., *In Hipp. Aph. comment.* 3.30 (17B.643, 17–647, 11 K.) τοῖσι δὲ ὑπὲρ τὴν ἡλικίαν ταύτην ἄσθματα, πλευρίτιδες, περιπνευμονίαι, λήθαργοι, φρενίτιδες, καύσοι, χολέραι, διάρροιαι χρόνιαι, δυσεντερίαι, αἰμορροΐδες. [Hipp., *aph.* 3.30] [. . .] αἱ δ' αἰμορροΐδες οἰκεῖον ὄντως εἰσὶ τῆς ἡλικίας ταύτης πάθος, ὥσπερ αἱ μελαγχολίαι. γίνονται γὰρ ὑπὸ μελαίνης χολῆς, ἐπειδὴν εἰς τὰς κατὰ τὴν ἔδραν φλέβας ἀθροώτερον κατασκήψη. Cette définition galénique des hémorroïdes a été empruntée par pseudo-Damascius dans son *Commentaire aux Aphorismes d'Hippocrate* (*In Hippocratis Aphorismos commentarius*) 2.382,15–17 Dietz. Sur le commentaire de [Damascius], cf. Magdelaine (1996) 289–306.

¹² Gal., *In Hipp. Epid. VI comment.* 5.25 (CMG 5.10.2.2, p. 303, 34–304, 5 = 17B.286 sq. K.) μελαίνης χολῆς ἐς ὅμοιον αἰμορροΐδι. [Hipp., *Epid. VI* 5.15] οἱ πλείστοι μὲν οὖν αὐτῶν αἷμα μέλαν ἐκκενοῦνται διὰ τῆς αἰμορροΐδος, οὐ μὴν ἅπαντές γε. γίνεται δ' οὐ κατὰ μίαν αἰτίαν αἰμορροΐς, ἀλλ' ἐνίοτε μὲν οὖν αὐτῆς τῆς φύσεως ἐκκαθαίρουσιν τὸν μελαγχολικὸν χυμὸν, ἐνίοτε δὲ πλῆθος ἐκκενοῦσιν, ὥς καὶ τοῖς διὰ ῥινῶν αἰμορραγοῦσιν, ἔστι δ' ὅτε φλεβὸς ἀναστομωθείσης τῇ βίᾳ τοῦ κατασκήψαντος εἰς αὐτὴν <αἵματος> ἄνευ τοῦ τὴν φύσιν ἐργάζεσθαι τοῦτο προνοητικῶς.

¹³ Gal., *De venae sect. adv. Erasistratum* 6 (11.169, 13–170, 5 K.) ἄχρι μὲν γὰρ τοῦδε καὶ Διοκλῆς ἠπίστατο καὶ Πλειστόνικος, Ἡρόφιλος τε καὶ Πραξαγόρας καὶ Φιλότημος

qui prirent connaissance directe de ses (*scil.* d'Hippocrate) traités, eux seuls apprirent par lui comment les hémorroïdes se génèrent-elles.” Dans ce passage, les mots de Galien πὼς μὲν αἰμορροῖς γίγνεται semblent de prime abord faire référence au début du traité *Des hémorroïdes* (αἰμορροΐδων τὸ μὲν νόσημα ὧδε γίνεται κτλ.); toutefois, la suite du texte avec les mentions de dysentérie et varices (πὼς δὲ καὶ δυσεντερία, πὼς δὲ καὶ κισός, κτλ.) me poussent plutôt à penser que Galien se réfère au texte des *Aphorismes* d'Hippocrate.¹⁴

Si le traitement chirurgical des hémorroïdes enseigné par Hippocrate a toujours été le point de référence et de départ incontournable de toute activité de recherche chez les médecins anciens, le choix du premier chapitre du traité consacré à cette maladie dans une anthologie d'époque tardive montre bien la continuité de la place d'honneur occupée par la doctrine du médecin de Cos, même en ce qui concerne les recherches sur l'étiologie des hémorroïdes. De surcroît, les liens très étroits et indiscutables présents entre le texte transmis par les manuscrits M et R et celui du traité hippocratique témoignent très clairement de l'usage et de la connaissance sans intermédiaire du texte d'Hippocrate par les savants byzantins.

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ἄλλοι τε πολλοὶ τῶν ἱατρῶν οὐκ αὐτοὶ μὲν ἐξεῦρον, ἐπόμενοι δὲ Ἱπποκράτει, πηνίκα χρὴ τέμνειν ἐκάστην ὣν εἶπον φλέβα. ὅτι δ’ ἀπὸ χολῆς μελαίνης εἰς ὅμοιον αἰμορροΐδι, τοῦτο οὐκ ἔτι πάντες γινώσκουσι, καίτοι σαφῶς Ἱπποκράτους διδάξαντος, ἄλλ’ ὅσοι γνησίως ὠμίλησαν αὐτοῦ τοῖς γράμμασιν, οὗτοι μόνοι πὼς μὲν αἰμορροῖς γίγνεται μεμαθήκασιν παρ’ αὐτοῦ, πὼς δὲ καὶ δυσεντερία, πὼς δὲ καὶ κισός, κτλ.

¹⁴ Je pense, en particulier, à *Aph.* 3.30 (4.500 L., cité ci-dessus, à la note 11) et à 6.21 (4.568,7–8 L.) τοῖσι μαινομένοισι, κισῶν ἢ αἰμορροΐδων ἐπιγινομένων, μανίης λύσις, où l’on trouve cité en couple αἰμορροΐδες/δυσεντερία et αἰμορροΐδες/κισός. Différent est l’avis de Anastassiou – Irmer (2001) 237, qui classifient cette citation de Galien comme étant tirée du traité *Des hémorroïdes*; je remercie vivement M. Dieter Irmer pour l’attention consacrée aux résultats de cette étude.

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FRANÇOIS TISSARD AND HIS 1508 EDITION OF THE HIPPOCRATIC *OATH*

Thomas Rütten*

Summary

A few years ago, a Greek text of the Hippocratic Oath (textus receptus) with an interlinear translation into Latin was (re)discovered in a book printed in 1508 in Paris. Its spiritus rector is François Tissard. This paper examines the nature of both the Greek and Latin versions of the Oath text and the rationale of including them in a book which contains an eclectic assemblage of texts in Greek, Latin and Hebrew. The paper also discusses the intellectual background of Tissard and his publishing programme, set up by Gilles de Gourmont. It addresses the social, political, pedagogical and religious implications of publishing a bilingual version of the Hippocratic Oath in 1508 in Paris, i.e. for the first time in the history of printing, and attempts to accommodate this “editio princeps” (at least for the present) within the textual history of the Hippocratic Oath.

Who would have thought that anything could still be added to the philological exegesis or rather the textual history of the Hippocratic *Oath*, the most commented upon text of the Hippocratic Corpus? Yet, at the end of the century just past, a text suddenly surfaced which, according to the latest research, can safely be regarded as the “editio princeps” of the Hippocratic *Oath*. This discovery—as most discoveries

* I should like to thank Alexa Alfer for her expert translation of this paper, and am also extremely grateful to all my colleagues who facilitated and enriched my year as Maître des conférences at the Université VII de Paris (2001–2002): Professor Claude Debru, Professor Eberhard Knobloch, and Professor Karine Chemla. Without the research resources of the Bibliothèque Nationale, this paper could not have been finished, even though it was, of course, quite another project that brought me to and occupied my time at Paris. I should also like to thank Professor Nancy Siraisi und Professor Philip van der Eijk for their helpful suggestions and for reading the final version of this paper. Finally, I am deeply indebted, in more ways than one, to Armelle Debru. She and her family were instrumental in making our time in Paris a truly unforgettable experience.

in our discipline—is, of course, properly speaking a rediscovery, and it comes with its own little history. Some years ago, I was in the happy position to present a 1518 print by Johann Froben (ca. 1460–1527) to an audience at Pisa.¹ This print gathered a number of texts, presented synoptically in Latin and Greek, with the express purpose of offering its readers a practical textbook introduction to Greek literature. The texts included, among others, Aesop's fables, the pseudo-Homeric *Batrachomyomachia*, Musaios' epyllion *Hero and Leander*, Agapet's *Princecy Code*, and the pseudo-Homeric *Galeomyomachia*. Amidst this pedagogical-didactic assortment of texts, I also discovered the Hippocratic *Oath*, the Latin version of which turned out to be that of Niccolò Perotti (1429/30–1480) dating from 1454/55.² The Greek version, meanwhile, did not seem to correspond to any manuscript version hitherto known to the scholarly community. At the time, I argued—and cited circumstantial evidence to the effect—that Beatus Rhenanus (1485–1547)³ ought to be regarded as the spiritus rector of this edition.⁴ In the case of the *Batrachomyomachia*, the trail led to Rhenanus' Greek tutor in Paris, François Tissard, whose edition of this text (with an imprint dated 18.9.1507) had demonstrably been in Rhenanus' possession, and to which Rhenanus had not only added his own interlinear Latin version, but which he had also apparently copied out again in his own hand.⁵ And yet it took a seasoned expert like Jean Irigoin to establish that it was not only the pseudo-Homeric trail that pointed to Tissard here; the Hippocratic *Oath*, too, had, as Irigoin was able to prove, been edited by Rhenanus' tutor, complete with his own interlinear Latin version.⁶

The fact that this edition had, until the publication of Irigoin's short article in 1999, completely escaped the notice of Hippocratic scholars may be explained by the rather obscure place of its discovery, "là où on ne pouvait guère l'attendre".⁷ The book in question had been published on the 29th of January 1508 (1509 nouveau style) in Paris

¹ Rütten (1999a). The print in question is: *Aesopi Phrygiæ Vita et Fabellæ* (1518).

² See Mercati (1925) 22; Monfasani (1981); Rütten (1996) 461–462, 479–480.

³ For Rhenanus, see von Scarpatetti (1985) 104–109.

⁴ Rütten (1999a) 519. In the meantime, this has been confirmed by Magdelaine (2000) 138–150.

⁵ Rütten (1999a) 521, n. 14. See also Sicherl (1979) 60.

⁶ Irigoin (1999).

⁷ Ibidem, 716.

and had circulated as “Grammaire hébraïque”⁸ or “Alphabetum graecum et hebraicum”.⁹ In reality, however, it contained an eclectic conglomeration of texts—Brunet calls it most fittingly “Opuscula (grammatica hebraica, etc.)”¹⁰—, the only common denominator of which was the practical and predominantly didactic purpose of their selection, namely their value as textbook exercises in the study and teaching of the Greek and Hebrew languages.¹¹ The interlinear translations into Latin can be assumed to have served the same pedagogical end. As far as content is concerned, the book offers a mixture of entertainment and moral and religious edification. A dialogue between a certain *Prothymopatrīs* and a certain *Phronimus*, or a “compendium de iudaeorum ritibus” sit next to an “Alphabetum Hebraicum”, a series of prayers, hymns, and psalms, the first few chapters of St. John’s Gospel, a table of Greek diphthongs, a list of Greek abbreviations, and a chart of the Greek counting system. Sandwiched between St. John and the Greek diphthongs sits the Hippocratic *Oath* (ff. Xiii–Xiv^v). The volume as a whole is flanked by a dedication from François Tissard to Prince François, as of 1515 King François I, and an epigraph by Tissard’s friend and fellow lawyer Pierre Cordier.¹²

Let us consider for a moment who the author of this collection, François Tissard, actually was. The bare facts about his life have already been collated by Henri Omont and Ernest Jovy from the prefaces to Tissard’s books, published between 1507 and 1509 by Gourmont in Paris, the manuscript lat. 7884 kept in the Bibliothèque

⁸ See, for example, Omont (1891) 21–23; Irigoin (1998) 395; Magdelaine (2000) 144; Quilliet (2002) 493, n. 84.

⁹ See, for example, Jovy (1899) 50–57.

¹⁰ Brunet (1864³) col. 866.

¹¹ The list of contents reads: Dialogus: Prothymopatrīs et Phronimus. De Iudaeorum ritibus compendium. Tabula elementorum hebraicorum. Documenta ut debeant illa elementa proferri ac legi. Ut Hebraei numeros signant. Oratio dominica hebraicis characteribus impressa. Genealogia beatae Mariae, una cum aliis plusculis, eisdem characteribus impressioni mandata. Jesus Nazarenus, rex Iudaeorum, latine, graece et hebraice. Grammatica hebraica succincte tradita. Tabula elementorum graecorum cum diphthongis et pronunciandi regulis, et pluribus graecis orationibus, et Hypocratis iurjurando. Abbreviationes graecae. Ut Graeci numeros signant amplissima descriptio. The book was printed by Gilles de Gourmont in quarto. I consulted one of the two copies kept in the Bibliothèque Nationale in Paris (shelfmark: RES-X-1574).

¹² Tissard (1508) f. Yiii^v. For Pierre Cordier, see *Archives biographiques françaises* I, 251, 261. The Harvard University Library holds two pamphlets from 1516 and 1518, respectively, by this otherwise rather unknown figure. I thank Jenny Rathbun of Houghton Library for providing a microfilm of the two short texts.

Nationale in Paris, from various university archives, and contemporary correspondences.¹³ According to these sources, Tissard was born into an old Amboise family, probably some time around 1460. He read canon and civil law at the Faculté des Arts in Paris and at Orléans,¹⁴ as well as at Ferrara, Bologna, and Padua during an extended visit to Italy. He was awarded a doctorate in law at Bologna, the Italian centre of legal learning, on the 19th of March 1506 (n. st.).¹⁵ But even though he read law under such renowned Bolognese tutors as Antonius Sollerius (de Salla),¹⁶ Joannes Campegius (civil law),¹⁷ and Antonio de Burgos (canon law),¹⁸ his Italian travels do not seem to have fostered an exactly burning desire to spend his future life as a town clerk, solicitor, advocate, barrister, or court's seal official.¹⁹ Rather, Tissard's main interest lay in the studia humanitatis—which, of course, meant first and foremost the study of the Latin, Greek, and Hebrew languages. Tissard himself cites Battista Guarino (1438–1513)²⁰ and Giovanni Calphurnio (1443–1503)²¹ as his tutors at Ferrara, where

¹³ See Omont (1891); Jovy (1899). See also Greswell (1833) vol. 1, 16–21; Tabaraud (1861); Malagola (1878) 103–106; de Nohac (1898); Paquier (1900) 36–37; Tilley (1918) 260–262; Renaudet (1953/1981) 501–513; Quilliet (2002) 493, n. 86; [Anon.] (2003a).

¹⁴ Orléans was a popular destination for law students as the examples of Tissard's famous colleagues Guillaume Budé and Johannes Reuchlin show.

¹⁵ Malagola (1878) 103; Irigoien (1998) 394.

¹⁶ See Jovy (1899) 21.

¹⁷ Ibidem; Malagola (1878) 103; Omont (1891) 3, n. 3.

¹⁸ Jovy (1899) 21–22.

¹⁹ As to the professional prospects of a lawyer at that time, see Burmeister (1974); Stolleis (1990).

²⁰ Greswell (1833) vol. 1, 16; Omont (1891) 2; de Nohac (1898) 299; Jovy (1899) 20–21; Tilley (1918) 261; Renaudet (1953/1981) 501. On Battista Guarino, see Malagola (1878) 151–159; Voigt (1893³) vol. 1, 560: „Der Liebling des Alten aber war der jüngste Sohn Battista, sein Ebenbild im Lateinischen und Griechischen, als Dichter, Redner und Lehrer, noch ganz jung, als er schon zu lehren begann, des Plutarchos Agesilaos übersetzte und ‘mit der Reise des Greises’, wie der Vater rühmte, die Studienordnung für Jünglinge schrieb [de modo docendi et discendi, Argent. 1514, um 1458 geschrieben], später vielfach umhergetrieben wie sein Vater in früheren Jahren. So ging aus dem Schulhause des gefeierten Meisters zugleich jenes Geschlecht der Guarini hervor, das drei Jahrhunderte lang in Poesie und Wissenschaft, meist zu Ferrara, fortblühte.“ Compare also Mugnai Carrara (1979) 180: “L’indirizzo filologico impresso dal Veronese agli studi, il suo metodo di insegnamento, l’indicazione e la riscoperta di certi testi, tutto un fervore di interessi mantenuti vivi poi dal figlio Battista e, in genere, da tutto il suo ambiente, furono raccolti e sviluppati da tanti studiosi di altri centri, anche lontani, che accorrevano a Ferrara per ascoltarlo.” What it was like to be Battista's student can be gathered from his pamphlet *De ordine docendi et studendi* edited by Piacente (1975). See also Piacente (1995).

²¹ Greswell (1833) vol. 1, 16; Omont (1891) 2; Jovy (1899) 21; Tilley (1918) 261.

he stayed from 1503 to 1505. According to Tissard, Calphurnio, however, died shortly after his arrival in the city.²² His Hebrew tutor at Ferrara, meanwhile, was a rabbi of the local synagogue.²³ There is also mention of Demetrius of Sparta (= Demetrios Chalkondyles, 1423–1511),²⁴ who taught at Milan at the time, as a Greek tutor of Tissard's. Filippo Beroaldo the Elder (1453–1505), "one of the few distinguished teachers of classics in the university of his native city Bologna",²⁵ is also cited as a tutor.²⁶ Also in Bologna, Tissard struck up a friendship with Giovan Battista Pio,²⁷ whose 1505 [1506] *Annotationes linguae latinae graecaeque* contain an epigraph by Tissard.

On the 1st of April 1507, Tissard completed a piece of work that had kept him away from his legal studies for quite some time, but which, as he states in the *praefatio*, he had nevertheless undertaken out of his profound admiration for Prince François, who was at this time accompanying Louis XII on his Italian tour,²⁸ and out of a heartfelt patriotism for his native France: the work was a Latin translation of three of Euripides' tragedies, namely *Medea*, *Hippolytus*, and *Alcestis*, for which he had used Janus Lascaris' editio princeps of c. 1495 as his source.²⁹ The dedication to François attests to the

²² Calphurnio died on the 18th of January 1503. See Marcotte (1987) 186–187.

²³ As stated by Tissard in his *De iudaeorum ritibus compendium*. See Zinguer (1992) 14: "... Tissard apprend l'hébreu chez un précepteur juif dont il dépeint les usages avec la plume d'un caricaturiste et ceci, pense-ton, pour se dégager du soupçon de 'judaïser'. Marguerite Soulié soutient que cette attitude ambivalente—éloge et mépris—va marquer la pédagogie de l'hébreu au XVI^e siècle." See Soulié (1989) 109 who claims that Tissard learned Hebrew in Bologna.

²⁴ Greswell (1833) vol. 1, 17; Omont (1891) 2; Jovy (1899) 21; Tilley (1918) 261; Renaudet (1953/1981) 501. On Chalkondyles, see Cammelli (1954); Petrucci (1973); Deutscher (1985) 290–291; Wilson (1992) 95–98; Fortuna (1999).

²⁵ Pfeiffer (1976/1999) 55. See also Garin (1956); Gilmore (1967); Krautter (1971) 37–38; Grafton (1985); Anselmi (1990).

²⁶ Greswell (1833) vol. 1, 16; Omont (1891) 2; de Nohac (1898) 299; Jovy (1899) 24; Tilley (1918) 261; Renaudet (1953/1981) 501. Beroaldo died in November 1505.

²⁷ Malagola (1878) 104; Omont (1891) 4; De Nohac (1898) 299; Jovy (1899) 24. On Giovan Battista (or Giambattista) Pio, see Dionisotti (1968) 78–110; d'Amico (1987); Del Nero (1990).

²⁸ Omont (1891) 4; Renaudet (1953/1981) 501.

²⁹ Omont (1891) 4; De Nohac (1898) 299–301; Jovy (1899) 25–26; Tilley (1918) 261; Renaudet (1953/1981) 501–502; Pfeiffer (1976/1999) 104 claims that Tissard was helped in this translation by Pierre de Ronsard and Lazare de Baif. See also Lecoq (1987) 65. Tissard's preface to his translation (preserved in Paris, BN, lat. 7884) can be found in Omont (1891) 64–68. It was partially translated into French by Jovy (1899) 58, n. 1. For Lascaris' edition, see Dibdin (1827^a), vol. 1, 522–524; Harlfinger (1989) 56–57; Wilson (1992) 99. On the reception of Euripidean plays in the fifteenth century, see Dibdin (1827^a), vol. 1, 522–562; Bolgar (1954) 497; Pertusi (1960); Stone (1984).

formative influence of Battista Guarino on his pupil Tissard, and also gives some indication of Tissard's enthusiastic immersion in the Humanist climate at Bologna—a city he praises as the new Athens.

Upon his return to Paris that same year, Tissard seemed resolved to promote the study of Greek and Hebrew in his own country, both through teaching, and—for the first time ever—through the production and distribution of printed texts. Thanks to the surviving letters of his students, who, after their experiences with Georgios Hermonymos of Sparta,³⁰ had been desperately longing for a competent Greek teacher, we know what a profound impression the homecoming Tissard made on the eager student population. Bruno Amerbach (1484–1519),³¹ for example, wrote from Paris to his father Johann in Basel on the 16th of October 1507 that, just recently, someone had arrived from Italy who now read on “*litteras Graecas*” at the public lecture theatre. He, Bruno, had had waited so long for such an opportunity and was now eager to throw himself into his studies with renewed vigour, which was why he humbly begged his father to allow him to extend his stay in Paris so that he, the son, would be able to bring back some Greek literature and learning upon his eventual return to Basel.³² Beatus Rhenanus,³³ who stayed in Paris until the end of 1507 and took the opportunity to attend Tissard's lectures while he was there, also praised him enthusiastically,³⁴ as did his friend Michael Hummelberg (1487–1527).³⁵

³⁰ On Hermonymos, see Irigoin (1977); idem (1998) 391–394; Sicherl (1979) 60. Erasmus, Guillaume Budé and Beatus Rhenanus were unhappy with his teaching, whereas Reuchlin had nothing to criticise about it. See also Quillier (2002) 492, n. 76.

³¹ See Welti (1985) 46.

³² Hartmann (1942) 333 (= letter no. 358: Bruno to Johann from 16th of October 1507): “*Salve, amantissime genitor. . . Venit hisce diebus quidam ex Italia, qui apud nos in publico auditorio lectitat litteras Grecas. Ego hisce litteris diu desideratis et tandem repertis penitus immersi et ingurgitavi animum, saturaturus, ni fallar, ligurientis ingenii ingluviem. Etenim et ingenio sua gula, suus est palatus, sicut et sensui; cui indulgere quid iucundius? Quare te supplex rogor, mi genitor, ut aliquod mensium interusurium mihi condones, quo et aliquid Grece litterature mecum in patriam deferre possim. Postea, simil ac iusseris, in patriam uolauero.*” Partly translated into French by Renaudet (1953/1981) 502–503.

³³ See von Scarpatetti (1985) 104–109.

³⁴ Rhenanus arrived in Paris on the 9th of May 1503 and left after graduation at the end of 1507. Sicherl (1979) 60; Holzberg (1985) 23; Muhlack (1993) 201.

³⁵ Horawitz (1875) 9; Horawitz/Hartfelder (1886/1966) 405. On Hummelberg, see Guenther (1986) 213–214.

As far as his publishing activities were concerned, Tissard had found an ideal partner in the printer Gilles de Gourmont (fl. 1499–1533),³⁶ who was himself not unfamiliar with the classics. The fact that a fair amount of recycling went into this process goes without saying. Most of the texts that were printed under Tissard's aegis over the following two years originated from the print shop of Aldus Manutius, whom Tissard had been personally acquainted with.³⁷ This is true not only for Tissard's first book, "Gnomagyricus", published on the 12th of August 1507,³⁸ but also for subsequent volumes such as the *Batrachomyomachia*, published on the 18th of September 1507,³⁹ the *Works and Days* of Hesiod, published on the 28th of October 1507,⁴⁰ Chrysoloras' *Erotemata* (= Greek Grammar), published on the 1st of December 1507,⁴¹ as well as for the book that concerns us here and which was published on the 19th of January 1508 [n. st. 1509].⁴² Not surprising, considering the sheer volume of the Tissard/Gourmont partnership's output. The decisive factor certainly was not philological originality or editorial expertise, but the simple fact that these Greek texts could now be printed in France and were available at

³⁶ See Guilleminot (1986) 120–121.

³⁷ Jovy (1899) 26. For Tissard's models, see Sicherl (1997).

³⁸ See Moreau (1972), 256 no. 188; Greswell (1833) vol. 1, 18–19; Malagola (1878) 105; Omont (1891) 5–6, 17–19, 39–43 (Praefatio) and 42–45 (Postface); de Nohac (1898) 299; Jovy (1899) 26–39; Tilley (1918) 261; Renaudet (1953/1981) 502; Lecoq (1987) 65; Irigoien (1998) 395.

³⁹ Moreau (1972) 242 no. 122; Jovy (1899) 39–41; Omont (1891) 6, 19, 45–46 (Praefatio); Greswell (1833) vol. 1, 19; Malagola (1878) 105; Tilley (1918) 261; Renaudet (1953/1981) 502; Irigoien (1998) 395. Paquier (1900) 77 and Tilley, op. cit., also mention a "Theocritus" which I was unable to locate.

⁴⁰ Moreau (1972) 235 no. 87; Greswell (1833) vol. 1, 19; Malagola (1878) 105; Omont (1891) 19–20, 47 (Praefatio); Tilley (1918) 261; Renaudet (1953/1981) 502; Irigoien (1998) 395.

⁴¹ Moreau (1972) 227 no. 50; Greswell (1833) vol. 1, 19–20; Malagola (1878) 105; Omont (1891) 6, 20–21, 48–51 (Praefatio); Renaudet (1953/1981) 502; Irigoien (1998) 395.

⁴² Moreau (1972) 299 no. 190; Greswell (1833) vol. 1, 21; Omont (1891) 6, 21–23, 51–52 (Praefatio), 52–54 (Dialogue), 54 (epigraph by Cordier); Paquier (1900) 37; Tilley (1918) 262; Lecoq (1987) 65; Irigoien (1998) 395. The fact that this publication was eagerly awaited, can be gathered from a letter written by Michael Hummelberg to Bruno Amerbach on the 9th of January 1508 (n. st. 1509). See Hartmann (1942) 371–372: "Ad te scribo, suavissime Bruno, ne immemorem me tui credas Franciscus Tissardus Ambaceus, communis Grecanice literature preceptor noster, Hebraicam grammaticam impressioni mandavit propediem publicitus auspicatorus. Hoc opus, hic labor erit, ab homine multiscio Hebreorum exantlve mysteria. (. . .)." For the same letter, see also Jovy (1899) 100.

an inexpensive rate. And yet, by 1509 Tissard seems to have all but vanished from both the academic and the publishing scene.⁴³

Before we turn to Tissard's version of the Hippocratic Oath, a few words on his publishing programme in general might be appropriate. It is characterised, I would argue, by a combination of social, political, pedagogical, and religious aspects:

1. The social aspect can be seen to manifest itself in a network of often still very young but enthusiastically Humanist friends who shared an eagerness to learn and study the ancient languages—particularly Greek, with which most of whom had hitherto not been acquainted at all. Through their linguistic training, they hoped to gain authentic access to the textual representatives of classical antiquity. These enthusiasts, who, often at the expense of their bread-and-butter jobs, devoted themselves wholeheartedly to the *studia humanitatis*, often laboured away for years outside of any formal academic context. Their intense networking compensated for this lack in institutional affiliation. They saw themselves as a community in spirit and spread the humanist credo in their correspondences and countless print publications.

2. The political aspect of Tissard's publishing programme resides primarily in the fact that his output implicitly declares the promotion of humanist scholarship and its dissemination in print the single most important touchstone of a cultivated state and its claims to cultural and political hegemony. Tissard relates an incident from his time at Ferrara, where, at the house of his tutor Battista Guarino, he had to witness the assembled Italians call his French compatriots “monoculos” (one-eyed) on account of their lack of Greek.⁴⁴ By addressing such accounts of the Italians' cultural arrogance to his dedicatee, the young Prince François, by comparing Bologna to Athens, and by implicitly extending the accusation of blindness to the entire French education system, which keeps its subjects in ignorance of the Greek

⁴³ Tissard is mentioned in a eulogy by Christophe de Longueil from 1510, quoted in Rice (1972) 388, n. 5. Jovy (1899) 57–59 discusses some archival evidence for a later date of death than 1509. In a letter dated 23 of July 1508, Jérôme Aléandre writes from Paris to Aldus Manutius in Venice: “On commençait à faire bruit autour d'un François qui sait le grec, et à faire imprimer, comme je vous l'ai dit plus haut. Mon arrivée a ruiné ses projets, et je crois qu'il n'enseigne plus. Je ne le connais que de nom; il s'appelle, je crois, François Tissard.” Quoted from Paquier (1900) 40.

⁴⁴ Omont (1891) 66 (Latin preface to Tissard's Euripides translation); Jovy (1899) 58.

language and thus deprives them of even the possibility of comprehending the origins of natural and moral philosophy, medicine and theology—even of the possibility of reading the texts of the Gospels in the original, or of properly understanding legal terminology—, Tissard, much in line with the spirit of a *translatio imperii*,⁴⁵ fans the flames of competition for cultural hegemony and legitimate succession to the classical civilisations between the two nations. Furthermore, the Guarino-episode plays to a growing sense of the nation-state and the attendant rise in interest in national psychologies. Against the backdrop of the wars between France and several of the Italian states, the avantgarde, i.e. the educational programme of the Humanists, becomes increasingly politicised. The emergence of a European system of super-powers, which, since the invasion of Italy by the French King Charles VIII (1483–1498) in 1494, could no longer be ignored, henceforth also left its mark on parts of the Humanist movement. In Tissard's case, this political dimension is evident in his choice of dedicatees: Prince François, later King François I of France, and Jean d'Orléans, Archbishop of Toulouse (in the case of the *Gnomagyrus*); Jean d'Orléans (for the *Batrachomyomachia*); Jean Morelet de Museau, Secretary “du sérénissime et très chrétien roi de France” (*Works and Days*); again Jean d'Orléans (for the *Erotemata*); and, last but not least, once more Prince François (for the *Opuscula (grammatica hebraica, etc.)*). Anne-Marie Lecoq even ventures the hypothesis that Tissard resided in Italy as a “propagandist de François”.⁴⁶ In any event, he repeatedly asks his dedicatees for their protection and appeals to them, not infrequently in the beseeching iterative, to remember him in days to come. And it seems that all this pleading paid off in the end: Jovy interprets some of the archive material to the effect that Tissard probably spent the autumn of his life as the king's authorised representative in his native Amboise.⁴⁷

3. Tissard's pedagogical enthusiasms not merely manifest themselves in his *praefationes*, where he never tires of extolling the advantages of Greek and Hebrew, particularly to his youthful readership. His selection of texts, their format (quarto) and inexpensiveness are equally

⁴⁵ On this mode of argument, see Goetz (1958); Krämer (1996).

⁴⁶ Lecoq (1987) 65.

⁴⁷ Jovy (1899) 57–58.

pedagogically motivated. Tissard's favourite authors—Homer,⁴⁸ Hesiod,⁴⁹ Phocylides,⁵⁰ and Pythagoras⁵¹—were all regarded as extremely ancient during his lifetime and—more importantly—to have believed in and affirmed the basic truths of Christianity. The same even goes for the hexametric *Batrachomyomachia*, which, during the Italian Renaissance, had counted as Homeric. In the texts he chose for publication, Tissard seems to have been pursuing some sort of original revelation of human knowledge that would appear all the less tarnished by transmission and tradition the further back it could be traced. In linguistic terms, his aim is to understand ancient Latin in terms of ancient Greek, and in particular to trace Latin literature back to its Greek literary origins. From a moral point of view, Tissard is concerned with purging contemporary morals by promoting a return to the universal Judaeo-Graeco-Christian roots.

4. Which brings us to Tissard's religious motivations. By invoking Hieronymus, the *vir trilinguis* fluent in all three of the ancient and biblical languages,⁵² Tissard explicitly appoints himself as an advocate not only of Latin and Greek, but also of Hebrew—thereby subscribing to the humanist ideal that the biblical scholar had to be *trium linguarum gnarus*.⁵³ Yet, Hebrew was a language that, in the predominantly Catholic and more often than not decidedly anti-semitic climate of the 1500s, was by no means unquestioningly regarded as one of the favourite languages of Humanism.⁵⁴ With his call for a

⁴⁸ On Homer during the fifteenth and early sixteenth centuries, see Dibdin (1827⁴) vol. 2, 39–71; Bolgar (1954) 498–500. Grafton (1997) 135–183 gives an excellent account on how Tissard's compatriot and colleague Guillaume Budé “read his Homer”. Another slightly later example is provided by Ford (1995).

⁴⁹ On Hesiod during the fifteenth century, see Dibdin (1827⁴) vol. 2, 29–39; Bolgar (1954) 497–498.

⁵⁰ On Phocylides during the fifteenth century, see Bolgar (1954) 502–503.

⁵¹ On Pythagoras during the Renaissance, see Kingsley (1995) 317–347.

⁵² In the preface to his translation of Euripides' plays as quoted in Omont (1891) 65.

⁵³ “This ideal was embodied in the trilingual university established by Cardinal Jiménez de Cisneros in Alcalá, in Richard Foxe's foundation of Corpus Christi College in Oxford, in Francis I's *noble et trilingue Académie* (later the Collège de France), in the trilingue college in Louvain, and in the provision by Friedrich III, elector of Saxony, of professorships in the three languages at the University of Wittenberg.” [Anon.] (2003b) 375.

⁵⁴ Ulrich Zasius, Tissard's contemporary and colleague, provides a good example for this kind of early 16th century anti-semitism: See Burmeister (1993). On Hebraistics during the Renaissance, see Zinguer (1992). The situation in France is

Christian Hebraistics, Tissard seems to have been a brother in spirit of his contemporary Johannes Reuchlin (1455–1522), with whom he not only had his profession as a lawyer, his studies in Paris (1473/74 and 1477/78) and Orléans (spring 1479–summer 1480), his first hand experience of the Humanism of the Italian Renaissance (1482, 1490, 1498), and some interest in translating Hippocrates in common,⁵⁵ but with whom he also shared an active concern for Jewish language and literature, and thus for the preservation of Jewish culture in general. The motivation here was a primarily theological one, born of the conviction that true knowledge was God-given knowledge, and that God had first revealed himself to the Jews of Israel. Tissard's enthusiasm for reform is thus not restricted to the education system and its curricula, but also extends to the Christian faith, to which the *redite ad fontes* applied just as much as it did to the scholastic academy.⁵⁶ A brave plea, especially considering the—at this time—still unchallenged anti-semitic stereotype of the Jews' collective responsibility for the death of Jesus, or the hotly debated legal question whether Jews, as subjects of the Holy Roman Empire, enjoyed the protection of the law or ought rather be regarded as objects without any rights before the law; not to mention the countless spiteful polemics accusing the Jews of having brought in the plague, poisoned wells, pierced hosts, and committed ritual murders at Easter.⁵⁷ Above all, the call for a Christian Hebraistics suggested that Jewish literature did in fact contain evidence of the advent of Christ, passages

well described by Soulié (1982) 109: "A l'aube du XVI^e siècle, les humanistes ont eu l'ardent désir d'apprendre l'hébreu, mais il s'agissait d'une véritable aventure: on n'avait en France ni maîtres, ni textes, ni caractères d'imprimerie, et pour certains le principal obstacle c'était la crainte de judaïser, d'être saisi par la mentalité juive et converti."

⁵⁵ See Rhein (1993). For Reuchlin's interest in Hippocrates, see his *Hippocrates De praeparatione*, 1512; *Johannes Reuchlin. Briefwechsel* (1999), 77, 345; Rhein, 1989, pp. 55–64. In his dedicatory letter to Johannes Stocker, Reuchlin exposes the idea of a *translatio medicinae* linking the Jews via the Egyptians and Greeks to the Germans. It seems that Reuchlin combines a cultural philosemitism with an actual antijudaism.

⁵⁶ See Soulié (1982) 109 where Tissard's eulogy of the Hebrew language in his *De iudaeorum ritibus compendium* is summarized in the following way: "C'est la troisième langue et il semble que cet accomplissement dans le domaine des langues doive ouvrir quelque source cachée de la connaissance; en second lieu c'est la plus ancienne, la plus pure (intactam) comme si une langue préservée dans le secret contenait un dynamisme particulier, une force créatrice, enfin c'est la langue que Dieu a choisie pour parler par la bouche des prophètes et annoncer la venue du Christ."

⁵⁷ See Kudlien (1972); Obermann (1983); Rohrbacher/Schmidt (1991).

akin to Christian belief, sentiments of deep symbolic value to both Christians and Jews in the form of the cabbalistic writings, and, with the Hebrew commentaries on the Old Testament, a valuable analogon to the Greek commentaries on the New Testament. As the obscurantists-debate shows—which was sparked off in 1509 by Reuchlin's report and evolved around the question of whether the Talmud and other Jewish writings ought to be confiscated or destroyed by the Christian authorities on account of their alleged anti-Christian content—, such enlightened attitudes were anything but common at the time, especially in Paris, where the University filed a counter-report to Reuchlin. Maybe Tissard, despite of all precautions,⁵⁸ had overdone it in the eyes of the Paris authorities when he published a book veritably littered with hebraisms. He certainly does report hostile reactions and threats and repeatedly asks his patrons for their protection. If Jovy is right, Tissard may well have been removed from the capital for his own safety after the publication of his last volume, the “Opuscula (grammatica hebraica, etc.).”⁵⁹

But where does the Hippocratic *Oath* fit in with all of this? Everything points to the fact that Christian Humanism, as a representative of which Tissard can safely be regarded, aims at a revelation of truth that would be common to all religions and all philosophical teachings. Hippocrates, as the arch progenitor of medicine, participated in this revelation, the closeness of which to Christian doctrine was, to the Christian Humanists, nowhere more apparent than in the *Oath*.⁶⁰ The religious connotations of the *Oath*'s tripartite structure—the opening invocation of the Gods, its central message (to preserve life and art untarnished and in their proper relation to the Gods), and the closing “Selbstverfluchung”—were easily incorporated into Christian systems of thought: the names of the pagan gods were substituted with the Holy Trinity, “sin” replaced “tarnish”, the “proper relation to the Gods” became “pleasing in the sight of God”, and the

⁵⁸ See Soulié (1982) 109 summarizes some of these precautions and concludes: “Ainsi la première grammaire française nous apprend avec quelle ferveur chargée d'espérance mystique on abordait la découverte de l'hébreu mais aussi les interdits d'ordre théologique et raciste qui se dressaient au seuil du temple et qui allaient marquer profondément la pédagogie de cette langue.”

⁵⁹ Jovy (1899) 59.

⁶⁰ See Rütten (1999b). Since Irigoin's 1999 publication brought to light an older edition, my title should better read: „Retextuierungen des hippokratischen *Eides* im Vorfeld seines Zweitdrucks unter dem Einfluß seiner Christianisierungsgeschichte“.

earthly afterlife referred to in the closing vow was transposed onto the next world. Furthermore, the principle of loyalty towards one's teachers referred to in the indentures could be appropriated to fit into Christian ideas of hierarchy and succession, the selective ban on abortion revised to justify Christianity's categorical ban on abortion, the vow of abstinence associated with Christian ideas of asceticism, and the ban on killing brought in line with the Fifth Commandment. The long history of the patristic and medieval Christianisation of the *Oath*⁶¹ thus meant that it no longer sat in any way uneasily amidst biblical texts and Christian prayers. On the contrary, the *Oath* now not only marked the historically palpable origins of medicine as such, but also described the future goal towards which medicine's projected moral and essentially Christian renewal was to strive.⁶²

In the *praefatio* to his translation of Euripides, Tissard recalls how he had been asked by certain physicians to lecture on the Greek physicians Plato, Aristotle, Hippocrates, and Galen,⁶³ whose teachings had not only been mutilated and profaned over the course of their latter-day interpreters' endless disagreements, but—far worse—whose works would soon be all but forgotten if one did not hurry to make this source (*fons*) and origin (*origo*) of the art of medicine accessible again to a contemporary public.⁶⁴ Medicine was thus perceived from the very beginning as an integral part of the knowledge of first revelation, while Hippocrates was regarded as its arch initiate and all-time guarantor. The intertextual links forged between the Hippocratic *Oath*

⁶¹ See my CD-ROM on the history of the Hippocratic *Oath* from Antiquity to the present day, available from Harrassowitz Verlag presumably as of 2005.

⁶² See Rütten (2002).

⁶³ To call all four ancient luminaries physicians was common practice in the fifteenth and early sixteenth centuries, as is beautifully illustrated by a title page on which Hippocrates, Plato, Aristotle, and Galen are depicted as a string quartet. See Champier (1516). It goes without saying that this practice reflects late medieval Galenism. For an illustrating example of a 16th century perception of an Aristotelian text as a medical text, see Martin (2002).

⁶⁴ Quoted in Omont (1891) 65: "Nonnulli enim Esculapidarum genere ac Hippocraticam sectam publice profitentes hoc nonnunquam (quum illis aliquas quandoque lectiones traderem) me poscebant, quo facilius ad illos percelebres ac famigeratos doctores graecos, Platonem, Aristotelem, Hippocratem, Gallenum et caeteros huiusmodi perinde se atque ad Pythii Apollinis oracula ex latinis transferrent, quod interdum mihi asseruerint eorum doctrinam mancā et ob varios intellectus variasque sententias et opiniones violatam, temeratam ac pessum ituram, ni breui ad hos veluti ad fontem atque originem illius artis pateret aditus."

and St. John's Gospel, whose "in the beginning was the Word" must have been music to the ears of the sect of literates, as Peter Sloterdijk calls the Humanists,⁶⁵ allowed the *Oath* to be read as just such ordinary revelation, applicable in this instance to the art of medicine and the exemplary life of the physician. And it was precisely such Christianising contextualisation that also lay at the heart of Tissard's efforts. His interest in the *Oath* seems to have been not primarily—or at least not exclusively—a philological one. In the case of the *Oath* at least, we simply cannot tell to what extent he was interested in the study of manuscripts as such, in their collation and textual reconstruction. Extrapolating from his published output in general, however, it does seem that his main aim was simply to offer the Paris public Greek and Hebrew texts for study purposes at affordable rates, and to overcome the technical problems encountered during the printing venture.

The question of Tissard's source for his Greek *Oath*-text thus remains unanswered to this day: Tissard's text certainly does not correspond to any of the *recentiores* known to scholarship so far.⁶⁶ The same goes for the Latin translation, which does not coincide with any of the hitherto identified and securely dated pre-1508/09 translations of the *Oath*.⁶⁷ It seems unlikely that Tissard, at Paris, edited and translated the text of the *Oath* himself. From what we know about his general working practices, it is far more likely that he brought both the Greek text and its Latin translation back from Italy, or that he at least took recourse to texts he had seen or worked on with one of his tutors there. We know that Johannes Cuspinian (1473–1529)⁶⁸ had copied the *Oath* in or around 1510 for a Vienna lecture on Hippocrates.⁶⁹ Why should the text not also have been used in Greek tutorials in the North of Italy? What is more, almost all of Tissard's classics tutors can be shown to have had medical interests, held medical manuscripts in their possession, or had translated medical literature into Latin: Beroaldo the Elder, for example,

⁶⁵ Sloterdijk (2001) 305.

⁶⁶ A list of Greek manuscripts containing the Hippocratic *Oath* can be found in Rütten (1997) 70–71, n. 11.

⁶⁷ Pre-1508/09 Latin translations of a prose version of the *Oath* were produced by Niccolò da Reggio (first half of the 14th cent.), Niccolò Perotti (1454/55) and Andrea Brenta (c. 1480). See Rütten (1996) 460–464, 478–483.

⁶⁸ See Weiß (1990).

⁶⁹ Ankwicw-Kleehoven (1959) 45, n. 102.

is reported by his pupil and biographer Jean de Pins of Toulouse to have studied the works of lawyers, philosophers, and physicians as well as those of historians, poets, and orators, and is said to have known all of the Latin and most of the Greek texts by heart.⁷⁰ An even more prominent example would be Demetrios Chalcondyles, whose Latin translation of Galen's *Anatomical Procedures* as well as his collection of medical manuscripts and connections to a number of famous Humanist physicians have recently been the subject of a research paper by Stefania Fortuna.⁷¹ Battista Guarino was probably also well acquainted with medical discourses—at least if reports are to be believed that his style of teaching largely presented a continuation of his father's efforts. In addition to his tutors, Tissard would probably also have come into contact with a number of other Humanists whose main interests lay in the study of ancient medicine and in Galen and Hippocrates in particular. Niccolò Leonicensi (1428–1524) comes to mind,⁷² as does Wilhelm Kopp (1450–1532).⁷³ As far as I know, however, there are as yet no reliable sources testifying to such personal connections.

For the time being, then, one can only study Tissard's version of the *Oath* and attempt to reconstruct its place in the textual history of the *Oath* off one's own back—not a terribly promising venture, it has to be said. Tissard's Latin version of the *Oath* is a word-by-word translation and thus stands closest to Niccolò da Reggio's translation from the first half of the 14th century. At first sight, this may seem surprising given the fact that, in Tissard's day, the more 'modern' translations by Niccolò Perotti and Andrea Brenta (ca. 1454–1484) were already available in print. Other authors, such as Symphorien Champier (ca. 1472–1535) or Johannes Cuspinian, or the editors of

⁷⁰ *Divae Catherinae Senensis simul et clarissimi viri Philippi Beroaldi Bononiensis vita per Joannem Pinum Gallum Tolosanum*, Bologna 1505, 138. Quoted from Krautter (1971) 25. See also *ibidem*, 42. Osler (1990) 233–235 mentions and quotes from a book entitled *De terraemotu et pestilentia* and published in May 1505 in which Beroaldo who had already published a *Declamatio philosophi, medici et oratoris* in 1497, announces a larger work devoted to medicine and law. Due to his death a few months later, however, it never materialized.

⁷¹ Fortuna (1999).

⁷² See Mugnai Carrara (1979); *eadem* (1991); *eadem* (1994); Nutton (1997); Fortuna (1999b).

⁷³ On Wilhelm Kopp (Guillaume Cop), see Bietenholz (1971) 170–172, 278–279; Bietenholz (1985) 336–337; Wickersheimer/Jacquart (1936/1979) 235–238; Delaruelle (1922); Delaunay (1935) 434–435; Portmann (1958).

the Articella—contemporaries of Tissard and, like him, eager to print Latin versions of the *Oath* and use such versions in their teaching—did choose to make these two ‘modern’ translations their point of reference.⁷⁴ But we must not forget Tissard’s didactic mission, which may well have made him favour an interlinear word-for-word translation of the Greek text over Brenta’s and Perotti’s Humanist versions. And even if this style of translation had, by the beginning of the 16th century, undoubtedly become an antiquated one—it certainly did afford Tissard an opportunity to show off his linguistic skills and present himself as a more refined philologist than his late-medieval predecessors. If Tissard was indeed inspired by Niccolò da Reggio’s translation of the *Oath*, it is likely that he had come across it in the form of the most recent of its four surviving copies, namely the 15th century Marcianus latinus XIV 124 (4044), f. 137^v–138.⁷⁵ There,—as a way of getting the audience in the right mood, as it were—the *Oath* is preceded by the passage from Hieronymus’ letter to the priest Nepotian, in which Hieronymus refers to the *Oath*.⁷⁶ The importance of this adaptation of the *Oath* for its reception in the early 16th century cannot, as I have shown elsewhere,⁷⁷ be overestimated. Erasmus of Rotterdam is our witness. And the religious connotations introduced by Hieronymus’ letter would surely have contributed to the receptive disposition of those eager to read and interpret the *Oath* in the light of a Christian Humanism. Tissard—like Erasmus, Melanchthon,⁷⁸ and Rhenanus—would certainly have been the ideal reader for such a textual conjunction of Hieronymus and the *Oath* itself which, furthermore, was subscribed with the word “Amen”.⁷⁹ And yet, a comparison between Tissard’s and da Reggio’s versions refuses to yield any conclusive evidence of a direct relationship between the two texts. Tissard’s inserted comments on the Latin translation—“Ionica dictio” with regard to the form ἑωντέου (see figure 2), or “multiplicata negatio magis negat” (multiple nega-

⁷⁴ Rütten (1996) 462, 464.

⁷⁵ See Zorzanello (1985) vol. 3, 155–158; Kristeller (1962–1995) vol. 2, 265. There are three additional manuscripts that contain Niccolò da Reggio’s Latin translation of the *Oath*: London, Wellcome Institute Library, 286, f. 117 (= L); Madrid, Biblioteca Nacional, 1978 (L. 60), f. 96^{a-b} (= M); Naples, Biblioteca Nazionale Vittorio Emanuele III, VIII D 25, f. 84–84^v (= N).

⁷⁶ Hilberg (1910) 438–439.

⁷⁷ Rütten (1999b) 513–518.

⁷⁸ See Rütten/Rütten (1998).

⁷⁹ At least in L and M.

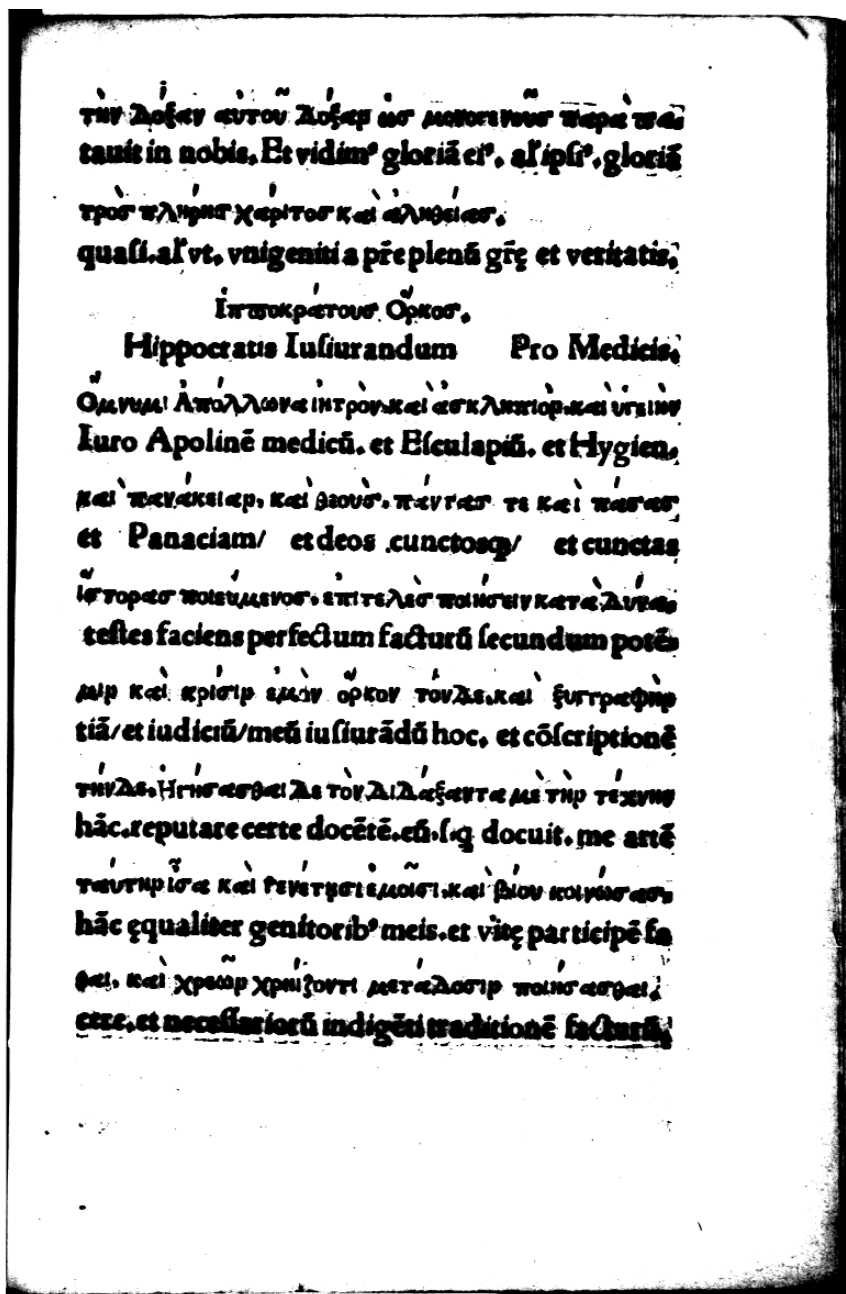
tion strengthens negation) with regard to the οὐ δώσω δὲ οὐδενὶ φάρμακον (see figure 2 and 3)—may, on the one hand, be simple explanatory asides to his student readers; on the other hand, however, they could represent corrections to existing translations, notes to his predecessors, so to speak, that may well have been addressed to Niccolò da Reggio specifically. The latter, for example, had written “neque dabo ulli”, while Tissard retains the multiple negation in Latin and notes “non dabo autem nulli”.⁸⁰ To interpret such comments as reflexes of a tutorial relationship, possibly even a North Italian one, in which the *Oath* had been the object of study and in which Tissard, as an alert student, would have diligently taken notes, would, however, be pure speculation. It is to be hoped that future research will uncover a further version of the *Oath*—this time, perhaps, one associated with Aldus Manutius and his print shop, which, as we know, had served Tissard as his model.⁸¹

⁸⁰ Compare Rütten (1996) 478 and Tissard (1508).

⁸¹ Judging from a marginal note to a Greek *Oath* version preserved in a manuscript that formerly belonged to the Phillips Collection Ms. 25553, f. 2 (second half of the sixteenth century) and is now in private property, such a Codex Manutianus must have existed. This note explicitly mentions such a codex detailing that it is in Jacobus Sadoletus' possession.

Illustrations:

Nos 1-4: Hippocratic Oath, in: F. Tissard, *Dialogus: Prothumopatris et Phronimus* (...), Paris: Gilles de Gourmont, 1508, ff. Xiii-Xiv^v (Paris, BN, RES-X-1574)



ἐὰν γὰρ τοῖς ἀδελφοῖς ἰσοῦ ἐπιπνεύει
 et genusex ipso (Ionica dictio) fratrib' equaliter
 ἄρρεσι καὶ ἀδελφοῖς τῆς ταχύνῃ τῶν τῆς ἡ Χρυσόστο
 Audicare. i. existimare. masculis Et edocturi arte
 αὐτοῦ μισθοῦ. καὶ συγγραφοῦ περὶ αὐτοῦ τε. Καὶ
 hāc si indigeāt sine mercede/ et cōscriptiōe. i. obli
 ἀκροῦσι καὶ τῆς λοιπῆς ἀπάσης μαθησιος με
 gatiōe/ pmissiōe. Et auscultatiōis. i. p̄ceptorū.
 τὰ δὲ οἱ ποιῶσθαι τοῖσι τε ἐμοῖσι καὶ τοῖς μετὰ
 et reliqu' vniuers' discipline participationē face
 λήξαντες καὶ μαθηταῖς συγγραμμένοις τε καὶ
 re/ filiisq' meis et me docētis. i. ei' q' me docuit. libe
 ἰστικῶς μενοῖς νόμοις ἱππικῶ. ἀλλὰ οὐδενὶ. Διαι
 ris/ et discipulis cōscriptisq'. i. imatriculatis. et in
 τῇ μὲν τε χρῆσθαι ἐπ' ὠφελείῃ καμνοντῶν. κατὰ
 ratis lege. i. in medica. alij aut' nemini. Diētis/ vel
 ἀνταμῶν καὶ κρίσις ἐμῶν. ἐπιδήλῃσι δὲ καὶ ἀδικίῃ
 ciberijs. vtar in vtilitatē laborantiū secundū potētia
 εἶς. Οὐ δώσω δὲ οὐδενὶ φάρμακον αἰτιθεὶς θά
 νατον. ἐν ἰατρικῇ μὲν documētis aut' et iniuria abstinētur.
 Nō dabo autē nulli (multiplicata negatio magis

νεσιμωρ, ουδε υφηγητομαι συνβουλην τοιηδε,
 negat) pharmacu rogat' fatale / neq' exponā cōfi
 Ομοίως δε ουδε γυναικι πασσον φθοριον δώσω,
 hū hoc. Similiter aut' neq' mulieri suffragiū corru
 πτωσ' δε και οσιωσ' διατηρησω βιον τον εμον και
 priorū dabo, caste aut' et scetē cōseruabo vitā meā
 τεχνην την εμην. Ουταμωσ' δε ουδε μνη ληθιωντας,
 et arte meā, Non excidā aut' neq' quidē lapillo la
 εκχωρησω δε εργατησιν ανδρασιν πρηξιον της δε
 borātes. Cedam autē operarijs vitis artis huius
 εισ οικιας δε εκοσας αν εσιω. εσελευσονται επι ωφει
 In domos aut' quotquot utiq' ingrediar' introibo
 λαβη καμνοντων εκτος εωρπασησ' αδικησ' εκουσινησ'
 in utilitatē laborantiū. extra existēs oēm iniuriā vos
 και φθορινσ' της δε αλλης και αφροδισιων εργαρ,
 Iūtarīam/et corruptelā hāc aliā/et venereaiū ope
 επι τε γυναικειων σωμάτων και ανδρειων ελευ
 rationū. In q' muliebrib' corporib' et virilib' libe
 ρων τε και δουλων. αλ' αν εν θεραπειη
 εισq' et seruis/que utiq' i medicina, i. intermedēdū.

ἢ ὅταν ἴδωμαι ἢ ὅταν ἀκούω ἢ καὶ ἐν τῷ βίῳ καὶ ἐν τῷ θάνατῳ
 vel videro / v'l audiet o / v'l sine medela secundū vīā
 ἀνθρώπων. ἀλλ' ἄν ποτε ἐκλαλέσθαι εἴω, σιγήσω
 i, in vita. hoīm. quē nō decet vnquā dici exira. Ta
 μὲν πρῶτα ἡγεύμενος εἰπαίτω τοιαῦτα. Ὁρκοῖς μὲν
 cibo nō dīcēda ducēs esse talia. Iurū s' adū quidē
 οὐ μὲν τοῦδε ἐπιτελέα ποιοῦντι καὶ μὴ ἐντρέχοντι εἰν
 Itaq' mihi hoc pfectū faciēti et nō cōfundēti esset
 ἐπιτελεσθαι καὶ βίου καὶ τέχνης δοξαζομένῳ παρὰ
 frui et vīta / et arte exultimato ab
 πάντι ἀνθρώποις εἰς τὸν αἰῶνα χρόνον, παρὰ βαινόντι
 omnibus hominib' in sempiternū tēpus, trāsgre
 ἄς καὶ ἐπιτοκούντι τ' ἀναγνίσκοντι τούτων.

dicenti autem et deieranti contraria horum,

Diphthongi proprii.

Αι	αι	ε
Αυ	ευ	af
Ει	ει	ι
Ευ	ευ	ef
Οι	οι	ι
Ου	ου	υ

Diphthōgi improprii.

Αι	φ	α
Ηι	η	ι
Υι	η	υ
Ωι	φ	ο
Ηυ	η	υ
Ωυ	φ	ο

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